The Stock Reorder Proposal System

by

Mr. Pornchai Lelajarassang

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

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

March, 2000

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Project Title	The Stock Reorder Proposal System
Name	Mr. Pornchai Lelajarassang
Project Advisor	Dr. Chamnong Jungthirapanich
Academic Year	March 2000

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

Approval Committee:

(Dr. Chamnong Jungthirapanich)
Dean and Advisor

(Prof.Dr. Srisakdi Charmonman)
Chairman

(Asst.Prof.Dr. Boonmark Sirinaovakul)
Member

(Dr. Prapon Phasukyud)
Member

(Assoc.Prof. Somchai Thayarnyong)
MUA Representative

March 2000

ABSTRACT

This system development project is about analyzing the current system, structuring and organizing in the aspects of designing and implementing computer software and hardware for the Stock Reorder Proposal System.

The company developed the in-house application package on AS/400 platform and ran this package 10 years ago. They had decided to change this packages to be Y2K ready since the end of 1998. This system was designed and continually revised from key user therefore it can serve monthly user requirements. However in the economic crisis, some tasks had to be developed and adjusted to be flexible, efficient, economical and appropriate to stay competitive in business. The new system is developed by modeling tools such as Dataflow Diagrams, Database and Design, Network Configuration, and Input and Output Design. This project is designed in order to connect the existing system with stock reorder proposal system and to utilize the resource.

This system will be useful for the company by diminishing of unnecessary work, manual work and to provide a sufficient report for management.

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I. INTRODUCTION

1.1 Background of the Project

The AE Company is now one of the distributors in Thailand. The company markets and distributes a wide range of automotive products and tools nation-wide, both directly to workshops and through an extensive network of dealers. The company also sells mostly direct to end-users, products such as textile components, industrial diesel engines, engine reconditioning machines and garage testing equipments, air-compressors, storage systems and processing and packaging equipments, all supported by an efficient after-sales-service and parts programs. On a project basis the company provides turnkey grain handling solutions encompassed by service from layout/design to final implementation and installation.

(1) Automotive part

(2) Packaging machine

(3) Project

Before the economic crisis, Automotive parts was the most active business due to the rapid growth in automotive industry. Nowadays the company did not meet the expectations, they have lost profits with the currency exchange rate problem, and shrinking of the automotive industry. Therefore the company can hardly concentrate in the level of stocks that does not effect the ability to serve the customers' needs, ordering point and purchasing process since these factors lead to an improved cash flow and the profits earned by efficiency of the business.

At present, the company runs business by the in-house application package on AS/400 platform or it might be called a centralized system. IT department by Development team; Project Manager, System Analyst, Programmer Analyst and

Programmer; has developed application software in COBOL language and had run this package 10 years ago. We had finished to change this package to Y2K compliant system since the end of 1998. This system was designed and continually revised from key users, therefore it can serve most user requirements. However some tasks has been done to implement solving problems for much more stock in the warehouse. We will only focus on reorder point process in this project. The current procedure involves manual check number of stock from inquiry or report, and daily sales progress report. The product manager has put to use his experience directly to contact with oversea suppliers by fax, telephone, or electronic mail in order to get specifically cheaper prices and not considering the number of old stocks, product life cycle, some items such as dead stock in the warehouse, and then waiting for confirmation documents about quantity, freight shipment, estimate time of arrival by fax also. After that they pass documents to purchasing department input data to system, put short notes in the control book manually and file these documents together until goods are in transit. These causes have a lot of problems such as out of stock of the need items, delay in reordering and also the delay in service to the customers.

Therefore, there is a strong demand for the manager to have a company based information system to handle the reorder items process with effectiveness. The system development plan is considered to develop the system into a computerized system that is separated from host system AS/400.

It will be run on Local Area Network (LAN) which might be either Ethernet or Token Ring on Win NT or Novell NetWare for the following 3 reasons:

(1) To reduce Host system workload including operation time, Hardware resource, and CPU time.

(2) To be able to attract end users and easy to operate applications by effectively using graphic interface design.

(3) To be able to implement in several platforms in many countries.

The new computerized system could help unravel the conflict between product manager and purchasing officer, and set up tools for purchasing staff in performing service with effectiveness and efficiency on his main duties by automatic formulate reorder point, supplier information, freight forwarding, arrival date, time. Otherwise the product manager will be able to diminish unnecessary work and turn to revise old products, create channels in new product to serve the market and customer needs. Another objective for the new system is to improve reporting, by a user-friendly system that could add on into the system.

To analyze the existing and design this new system to meet all those expectations and requirements of the manager that will give the up to date information for better decision-making and better services to the customer.

1.2 Objectives of the Project

The objectives of the project are as follows:

(a) To analyze the current system, main problem and design the new system development for the automotive department.

(b) To reorganize the functionality and responsibility for both production manager and purchasing staff by the company policy.

(c) To develop and test the software package for the automotive department in Thailand and for regional companies which is developed by Microsoft Visual Basic.

1.3 Scope of the Project

The project will cover major parts of the stock reorder proposal system that includes:

(a) Download database as text file that needs to run stock reorder proposal system from host system (AS/400) by Query 400 program.

(b) Upload database from host to stock reorder proposal system.

(c) To maintain master files' Stock reorder proposal.

(d) To implement the system.

(e) To analyze the output report.

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II. THE EXISTING SYSTEM

2.1 Background of the Organization

The AE Company was established in 1955 with a registered and paid-up capital of 50,000,000 Bahts. The company's quarter head was located in Malaysia. The information Technology has been designed by head quarters. Thailand site has 2 platforms such as:

(1) Minicomputer AS/400 for running the business application.

(2) Client/Server NetWare for running the Intranet and Internet mail. However the company has applied Frame Relay circuit port speed 128Kbps and commit rate 64Kbps with CAT for sending monthly and daily operation database through the head quarters.

The company's customers can be classified into three main groups as follows:

(1) Cash sales or walk-in Customers. Normally most of them are retail buyers who pay on a cash basis. The proportion of this group is about 20%.

(2) Car services/ Show room. The policy of this business will not have more stocks of auto-part and has to order several automotive parts from international trading firm. They buy on 60-90 days credit terms. The proportion of this group is about 30%.

(3) Dealers and sub-dealers whose location is at Bangkok and upcountry. They have to commit and estimate to the company, the number of goods to order by giving monthly and annual targets. They will get a special discount rate and long term credit, which is 90-120 days. The proportion of this group is about 50%.

The company employs about 70 persons who are separated by 10 persons at the management level. Executive level is about 20 persons and the remaining 40 persons are at officer level. The duty of each person in this organization chart is summarized as follows:

(1) General Manager

Supervised by: Chief Executive Officer

Key Responsibilities:

(a) To provide critical leadership and accountability in setting up the new company.

(b) To take the lead in creating world class corporate standards for sales and service; formulate strategies and tactics in business development, marketing and on time implementation of projects; and provide effective management of the new company's financial and human resources.

(2) Finance & Accounting Manager

Supervised by: General Manager

Key Responsibilities:

(a) He will report to an expatriate General Manager.

(b) To be responsible for the company's financial and accounting management.

(c) To coordinate with the company's financial advisory team in pre-opening financial arrangements and managing the company's financial matters.

(3) Product Manager

Supervised by: General Manager

Key Responsibilities:

(a) Sales forecasting

(b) Payment collection

(c) Conduct product training for sales people.

(d) Sales stimulating interest and support among the sales force.

(e) Product pricing and sales promotion

(f) Ensuring to achieve the targeted product turnover and gross profit.

(g) To take care of parts of inventories and warehousing.

(h) Recruitment and selection of sales people

(i) Responsible for stock management.

(j) Preparation of purchase order to principals / suppliers to order goods.

(k) Supervise subordinates who report directly to him.

(4) Technical Manager

Supervised by: General Manager

Key Responsibilities:

(a) Responsible for the service section.

(b) Responsible for achievement and control work efficiency and effectiveness of the quality of service.

(c) Responsible for arranging internal and external technical training program for sales people and distributor.

(d) To ensure the availability of spare parts stock.

(e) Preparation of reports and documentation for warranty claims and faulty spare parts.

(f) To ensure the sales of maintenance contract and training courses to customer.

(g) To determine and ensure the improvement required for the existing process of service section.

(h) To ensure that new equipments are delivered and installed to customers' satisfaction.

(i) To support any technical problems for branches and sales division.

(j) To ensure that outstanding are collected promptly.

(5) Information Technology Manager

Supervised by: General Manager

Key Responsibilities:

(a) Prepare maintenance and installation software and hardware.

(b) Provide consultation in information technology utilization to end-user.

(c) Training and counseling to improve performance and technical know-how in software application.

(d) Prepare an action plan, times schedule and formulate alternative system.

(e) Co-ordinate with computer vendor and IT regional office to implement new application.

(6) Executive Secretary to General Manager

Supervised by: General Manager

Key Responsibilities:

(a) To assist the GM to perform daily tasks.

(b) To perform and monitor administrative duties.

(c) To coordinate travel plans and ensure cooperation with Malaysia Head Quarters and overall cooperation to optimize company resources utilization.

(7) Service Engineer

Supervised by: Technical Manager

Key Responsibilities:

(a) To issue service reports for every job done / completed.

(b) To deliver and install new equipment and provide basic operational guide of equipment to customer.

(c) To provide maintenance service to customer.

(d) To ensure that outstanding payment are collected promptly.

(8) Sales Coordinator / Customer Service Executive.

Supervised by: Product Manager

Key Responsibilities:

(a) To handle the customer inquires.

(b) Preparation of formal documentation for sales order, e.g. invoice, delivery note, sales order form, etc.

(c) Follow-up with principals, suppliers, and store on delivery of goods to customers and goods receive from principal.

(d) To assist Product Manager and sales personnel on stock management.

(e) Preparation of quotation

(f) Filling of all documentation relating to the sales, e.g. purchase orders from customer and to suppliers, invoice, delivery orders, sales order form, etc.

(g) Follow-up on payments to principals and suppliers.

(h) Follow-up on payments from customers.

(9) Sales Supervisor

Supervised by: Product Manager

Key Responsibilities:

(a) To assist Product Manager to forecast by product line.

(b) To take care of payments collection.

(c) To be a consultant for sales people.

(d) Product pricing and sales promotion

(e) Ensuring to achieve the targeted product turnover and gross profit.

(f) To take care of parts of inventories and warehousing.

(g) To supervise subordinates who report directly to him.

(10) Sales Personnel

Supervised by: Sales Supervisor

Key Responsibilities:

(a) Customer visitation and follow-up on customer requirements.

(b) Up to date customers with the latest product.

(c) Market development and business solicitation

(d) Project evaluation, costing and quotation

(e) Market competitor information

(f) Sales promotion

(g) Preparation of accounts opening for customers

(h) Sales and sales target management

(i) Payment collection

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(11) Finance & Accounting Supervisor

Supervised by: Finance & Accounting Manager

Key Responsibilities:

(a) Reporting to Finance & Accounting Manager.

(b) Supervising the finance and accounting department for periodical account closing and other activities assigned.

(c) Physical checks stock and supervise worker

(12) Finance & Accounting officer

Supervised by: Finance & Accounting Supervisor

Key Responsibilities:

(a) To assist Finance & Accounting Supervisor to verify documents and reconciliation figures such as to reconcile bank statements.

(b) To record daily accounting transactions.

(c) To prepare accounting reports.

(13) Worker / Warehouse Staff

Supervised by: Finance & Accounting Supervisor

Key Responsibilities:

(a) Packing goods by order and delivery to customer.

(b) Counter check between invoice and goods received.

(c) To coordinate with Finance & Accounting Supervisor for short received, damage and exceed goods received.

(d) Arrange goods by stock location.

The organization chart of AE Company is shown in Figure 2.1.

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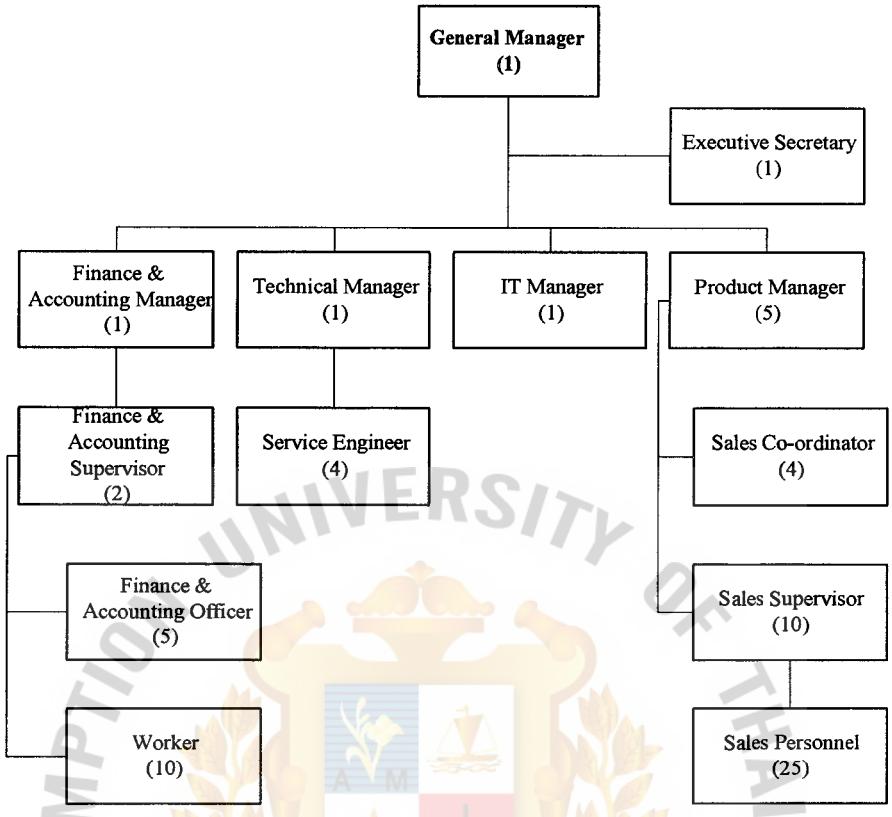

Figure 2.1. The Organization Chart of AE Company.

2.2 The Existing Stock Purchase System

(1) Scope

This module covers the following stages in the receipt of inventory from suppliers:

(a) Registration of a purchase order

(b) Printing order requisition

(c) Registration of supplier's invoice-purchase order links

(d) Receiving stocks

(e) Printing goods inward voucher

(2) Objectives

The Stock Purchase Module aims to enable the company to:

(a) Maintain an up-to-date information of:

(1) Stock quantities that are ordered from suppliers.

(2) Stock values in foreign and local currency.

(3) Estimated arrival of stocks.

(b) Set up a standard and proper stock purchasing procedure.

(c) Generate stock movement (inwards) transactions.

(d) Generate transactions for the aging of stock reports in the stock accounting module.

(3) Feature

(a) Register purchase order.

(b) Register supplier invoice.

(c) Received stock with supplier invoice.

(d) Received stock without supplier invoice.

(e) Multiple receiving round pre order.

(f) Goods with its markup %, miscellaneous charges.

(g) Goods inwards voucher.

(h) Several reports.

(4) Module Integration

As the stock purchase module deal with stocks and the account ledger, it is integrated to various other modules in Application. These modules are File Maintenance (FM), Stock Accounting (SA), Order Entry (OR), Accounts Payable (AP), and General Ledger (GL).

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(5) File Maintenance Integration

Stock purchase module is integrated to file maintenance through the various master files. File maintenance deals with maintenance of Text files, Containing different coding, systems used in Application. Before utilizing the stock purchase module, ensure that the Text file mentioned below are maintained properly in:

(a) Department Code

(b) Branch Code

(c) Currency Code

(d) Supplier Master

(e) Article Master

(f) Conversion Factor

(g) Account Rules

(h) Cost Markup Table

(6) Stock Accounting Integration

The stock purchase module is integrated to stock accounting through the article master files. The stock accounting module allows the system to:

(a) Receive stocks for invoicing out (restricted usage).

(b) Transfer stock from one location or branch to another.

(c) Adjust stock quantity levels due to discrepancies.

(d) Adjust stock value without quantity change.

(e) Adjust article unit cost.

(f) Effect stock depreciation.

Occasionally there may be discrepancies of stocks from the supplier's invoice and the actual quantity delivered. It is then possible to adjust the quantity through the stock accounting module.

Furthermore, the stock accounting module generates stock movement and aging reports from article transactions created in order entry, stock accounting and stock purchase modules.

(7) Accounts Payable Integration

Stock purchase module is integrated to account payable module through the supplier and invoices files.

As the stock purchase module receives the stocks from suppliers, Account Payable keeps track of the outstanding credits with the suppliers.

(8) General Ledger Integration

Stock purchasing module is integrated to general ledger module through the accounting transaction file.

The general ledger module will contain a summary of details of all the accounts booked during stock ticking. (i.e. process of receiving stocks at the warehouse)

(9) Operation Flow

This section describes the flow of a purchase order form creation up to receipt of stocks. The Operation Flow is shown in Figure 2.2.

(10) Diagram of Existing System

The Context Diagram and Data Flow Diagram of Existing System are shown in Figures 2.3 and 2.4.

2.3 Existing Stock Purchase Function

The existing functions of the company can be summarized as follows:

(a) Receive order from customer.

(b) Register purchase order.

(c) Print order requisition for data verification.

(d) Print official purchase order to be sent to the supplier.

(e) Receive supplier's invoice before the goods arrive.

(f) Storekeeper checks the goods arrived with supplier's invoice and also adjust the stock level of each article received then print "Goods Inward Voucher".

(g) Transfer stock to system.

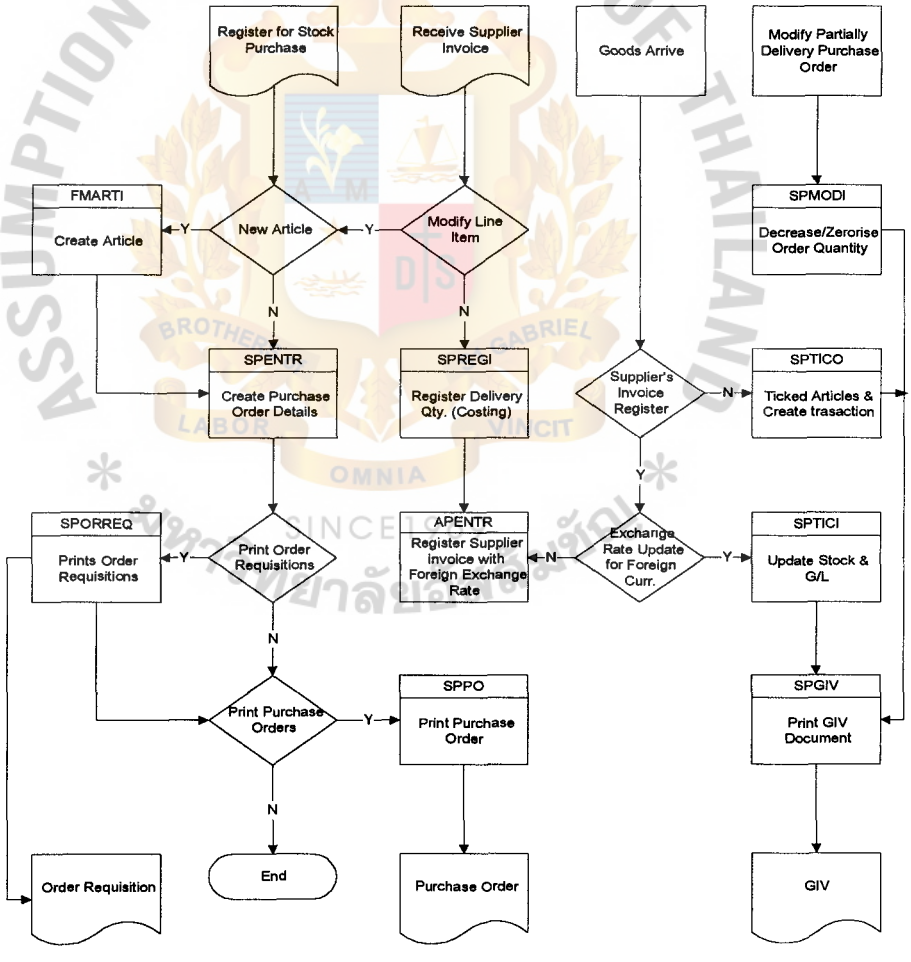

Figure 2.2. An Operation Flow.

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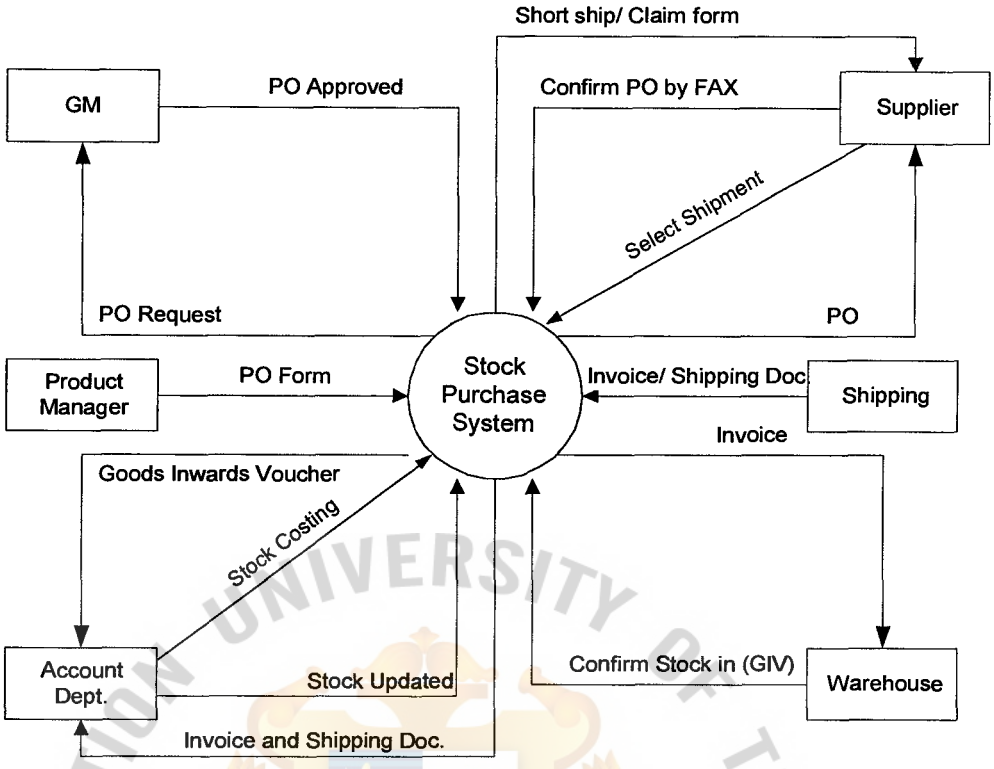

Figure 2.3. The Context Diagram of the Existing System.

2.4 Current Problem and Areas for Improvement

The current problems and areas for improvements of the existing system can be summarized as follows:

(a) The system can not provide sufficient information for management to plan and forecast sales by items.

(b) The existing system did not have any functions to support the stock reorder and ordering point.

(c) Difficult to manage the stock level.

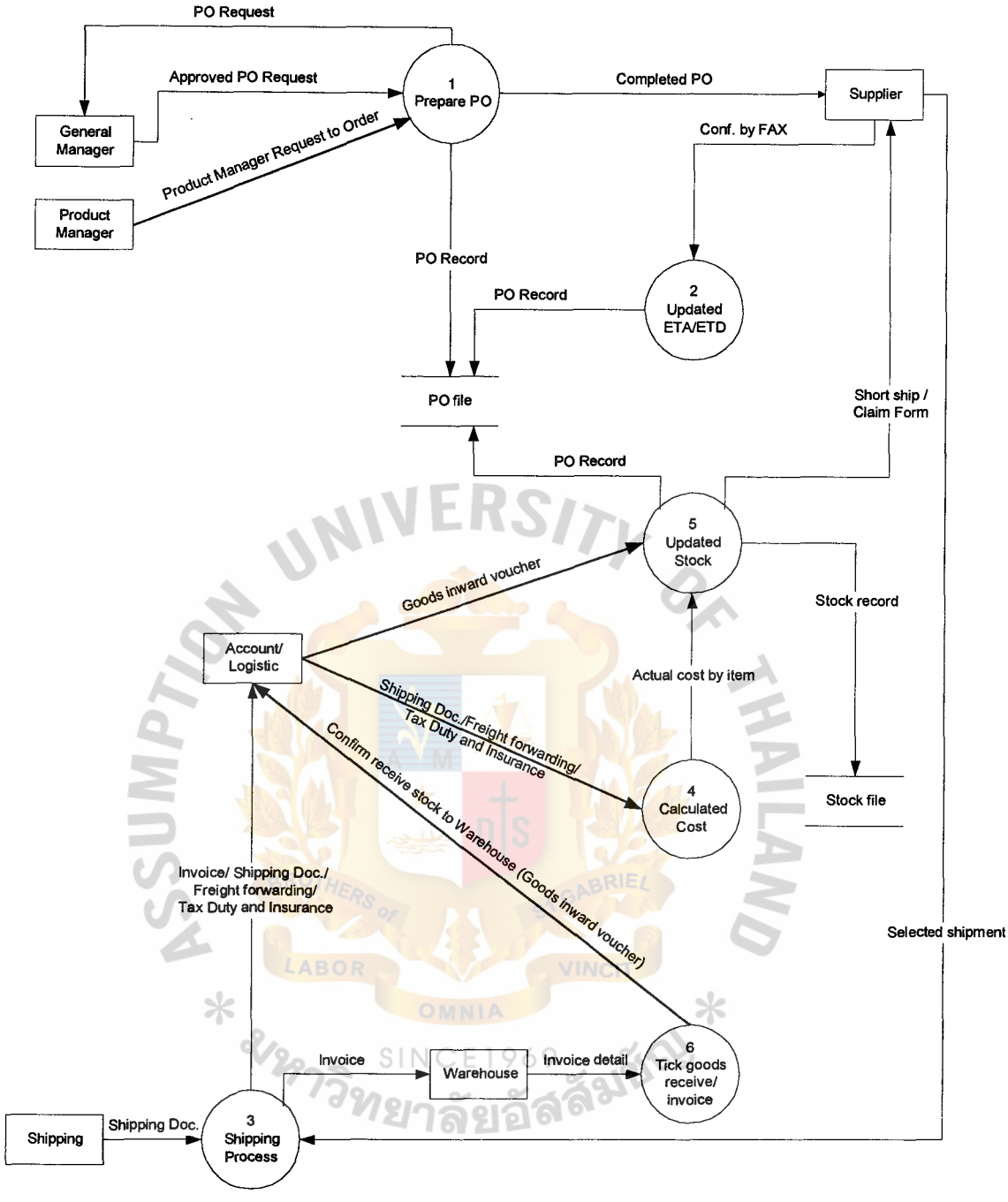

Figure 2.4. The Data Flow Diagram of Existing System.

2.5 The Existing Computer Systems

(1) Existing Hardware

(a) Server

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(1) AS/400 Model 150

(2) PowerPCAS 13.8/27.0 CPW Processor

(3) Memory 128 MB

(4) DASD - Disk Drives 8 GB

(5) Workstation Sessions Allowed 28 units

(6) Communication Lines - V.35

(7) Local Area Networking – Ethernet, Fast Ethernet

(8) Data and Fax Modem

(9) Uninterruptable Power Supply

(10) Tap and CD ROM

(b) Workstation

(1) Ten sets PC Model Pentium 120 MHz

(a) CPU – Pentium speed 120 MHz

(b) MB Floppy Disk Drive (3.5")

(c) 1 MB Video Adapter, RAM 16 MB

(d) Hard Disk 1.5 GB

(e) Ethernet LAN Card

(2) Eighteen sets PC Model Pentium II.

(a) CPU – Pentium 350 MHz

(b) MB Floppy Disk Drive (3.5")

(c) 8 MB Video Adapter, RAM 64 MB

(d) Hard Disk 5 GB

(e) Ethernet LAN Card

(f) CD ROM 32X

(3) Printer

(a) Two sets HP Laser Jet 4 Plus

(b) Two sets Dot Matrix OKI Model 591

(c) One set IBM Line printer

(3) Communication System

(a) Two sets Ethernet Hub 16 ports

(b) Ethernet LAN Card for server

(c) FAX/Modem

(4) Back-up System

(a) Tape Backup Model #6390 7GB 8mm Cartridge Tape Unit. The #6390 can be used for save/restore, alternate IPL, migration, and 8mm cartridge tape exchange using appropriate media and density.

(b) RAID-5 protection is supported for all 1.03 GB, 1.96 GB, 4.19 GB, 8.58 GB, and 17.54 GB (1-byte or 2-byte) provided that it is supported by the disk controller. A minimum of four disk units of the same capacity are required for a valid RAID-5 configuration. Parity information can be spread across four or eight of the disk units in an array and is automatically maintained as part of the RAID-5 protection feature. Internal disk units of different technology (that is, different feature numbers), but of the same capacity, can be either mirrored or RAID-5 protected. Having parity spread across eight disk units gives better performance in the event of a disk unit failure

since the data required to dynamically rebuild the data on the failed disk is accessed from an eighth of the disk units as opposed to a quarter. If one disk unit fails. it cannot be used to read or write data. The disk unit controller then reads the parity and data from the same data areas as the other disk units to dynamically rebuild the original data from the failed disk unit to satisfy ongoing read requests. When data needs to be written, the controller generates the parity information for the failed disk unit as if it were still operating. As far as the AS/400 is concerned, the disk units continue to respond to I/O even though a single disk unit has failed.

(3) Existing Software

(a) Software Packages for AS/400

ValuPak

(1) AS/400 Client Access Family for Windows

(2) Query for AS/400

(3) DB2 Query Manager and SQL Development Kit for AS/400

(4) Print Services Facility 1 – 19 Impressions per minute

(5) Performance Tools for AS/400

(b) GroupWare

(1) Lotus Notes Domino – it is the premier GroupWare product providing rich client/server E-mail and messaging. Robust web serving and web publishing and application development environment, and an unequaled document database management

system. Lotus Noted now runs natively on the AS/400 and is called Domino for AS/400. Domino for AS/400 leverages AS/400 skill and provides highly integrated access to AS/400 data.

(2) Language Dictionaries for OS/400 – Provide spelling verification and aid, synonym aid and correction assistance.

(c) Data Management

(1) Query/400 – Provides quick access to the AS/400 database, allowing various formatting and selection criteria; no programming knowledge required.

(2) DB2 400 Query and SQL Kit – Provides easy-to-use commands and an interactive interface for accessing, reporting, and manipulating data. Query manager provides interactive query and report generator. SQL Development Kit provides pre-compilers for processing embedded SQL statements.

(d) System Management

(1) ADSTAR Distributed Storage Manager for OS/400 –Provides an enterprise wide backup and archives facility for a wide variety of LAN file servers and individual workstations. Provides administrator-controlled, highly automated, centrally scheduled, network-based backup and archive function for workstations and LAN fileservers. Backs up data from clients running on OS/2^{tm}, NetWare, Windows^{tm}, DOS, Macintosh^{tm}, UNIX, DEC ULTRIX, HP-UX, and SunSolaris.

(2) Backup Recovery Management System - Provides a structured approach for archive, backup, and recovery. Has an automatic database file recovery facility. Assists in anticipating resources.

(3) Job Scheduler for OS/400 – provides a highly comprehensive, full-function job scheduler and report distribution system. Facilitates unattended operations, which helps improve accuracy in managing batch applications.

(4) Performance Tools – allow evaluation of AS/400 performance and helps in planning future requirements. Menus and interactive displays are used to obtain printed and online performance reports, which can be graphic or tabular. Contains a knowledge-based advisor that can analyze performance and explain and implement recommendations.

(5) SysView System Manager – part of the integrated System View Operation Center offering. Provides central site changes and distribution management for remote systems. Automatic distribution of PTFs and remote problem analysis.

(e) Application Development Tools

(1) Integrated Language Environment COBOL for AS/400 – enhances application environments for COBOL. Allows modular coding for smaller, more maintainable programs. Provides foundation for future application growth through improved performance and quality, and programmer productivity.

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(2) Integrated Language Environment RPG for AS/400 – enhances application environments for RPG. Allows modular coding for smaller, more maintainable programs. Provides foundation for future application growth through improved performance and quality, and programmer productivity.

(3) ADT – Application Development Tool set Client Server for OS/400 PC-based tool set used in developing AS/400 host application as well as PC RPG applications. Consists of CODE for OS/400 and VRPG Client.

(f) Software Packages for Workstation

(1) Microsoft Windows95

(2) Microsoft Office 97

(3) AS/400 Client Access

(4) McAfee Virus Scan

(5) Dos version 6.0.

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III. THE PROPOSED SYSTEM

The proposed system will provide Stock Reorder Proposal add on the existing system and also improve purchasing function to the system and reducing the redundant process of stock reorder to be standard and follow up the company's policy.

The operational level can get several benefits as follows:

(a) Reduce the unnecessary work, manual work to prepare Purchasing Order.

(b) Set up stock reorder system as a tool for purchasing staff and increase the degree of effectiveness among the whole process.

(c) More clarity in functionality and responsibility to do purchasing functions.

(d) Report.

The management level can get several benefits as follows:

(a) Effective management in terms of reordering point.

(b) Controllable stock in minimum level.

(c) Flexible to change configuration on SRP to make decisions.

(d) Sufficient report.

(e) Reorganization.

The proposed function is added-up in order to get the effective purchase order system process.

(a) Prepare database for SRP system.

(b) Account & Logistic staff has responsibility to run SRP system to issue the Purchase Order and SRP report.

(c) Product manager will scrutinize the report and insert forecast sales to the months in the order cycle and forward months where forecast sales are not equal or close to Average monthly sales.

3.1 Proposed Procedures

The proposed Context Diagrams and Data Flows Diagrams are shown in Figures 3.1 and 3.2, respectively.

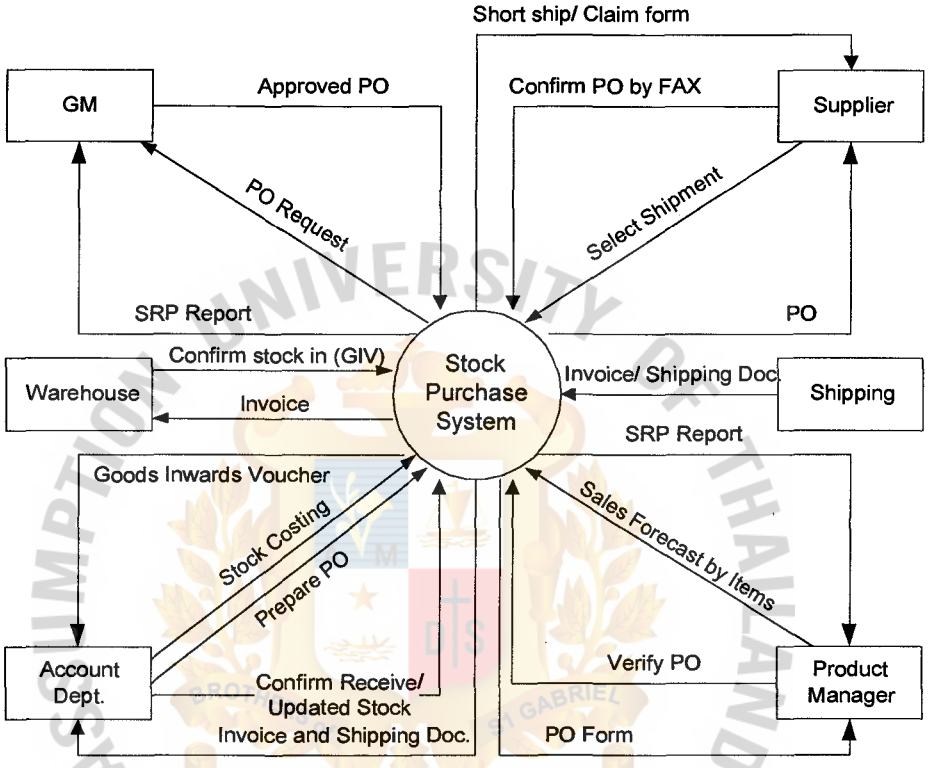

Figure 3.1. The Context Diagram of Proposed System.

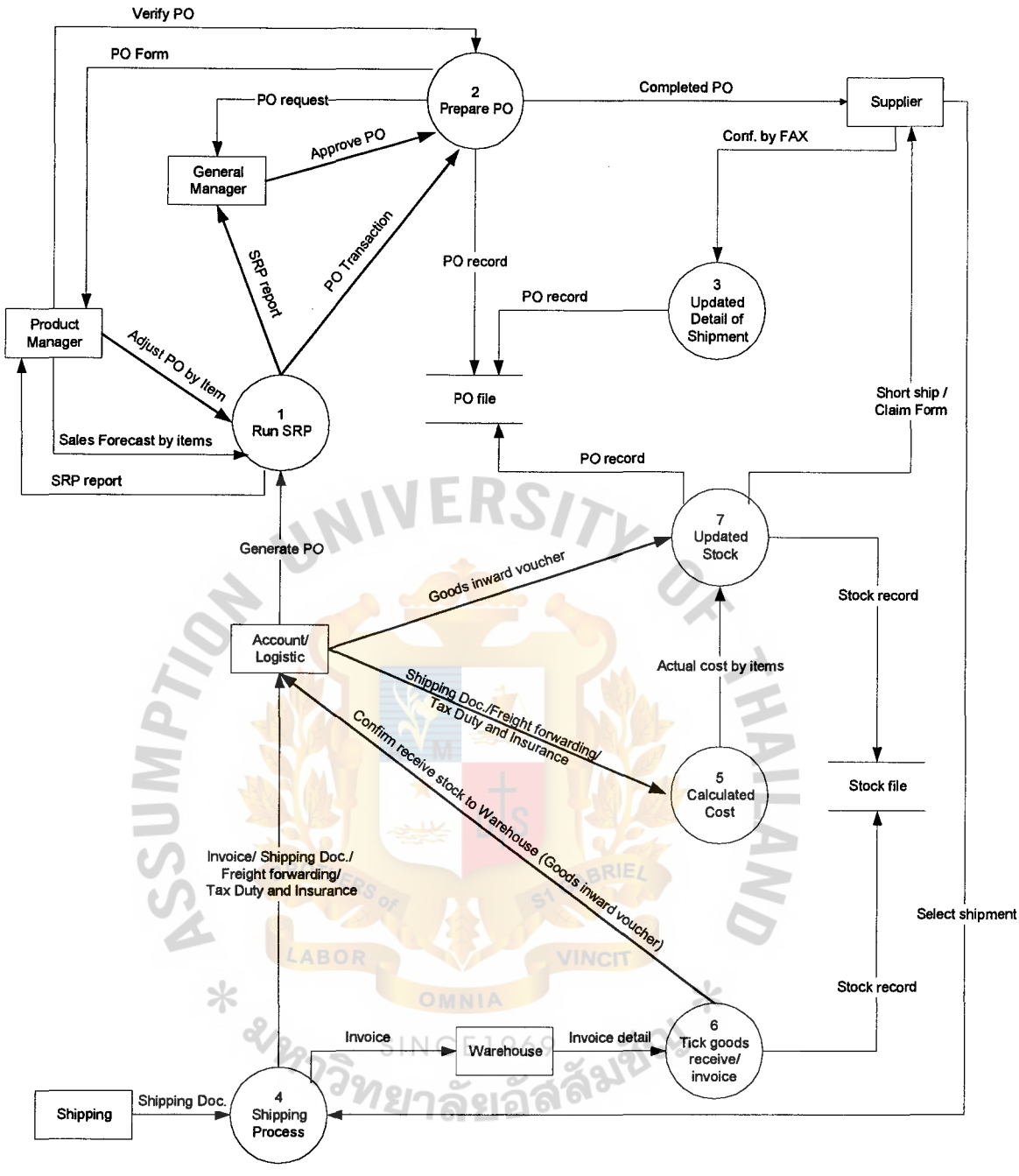

Figure 3.2. The Data Flow Diagram of Proposed System Level 0.

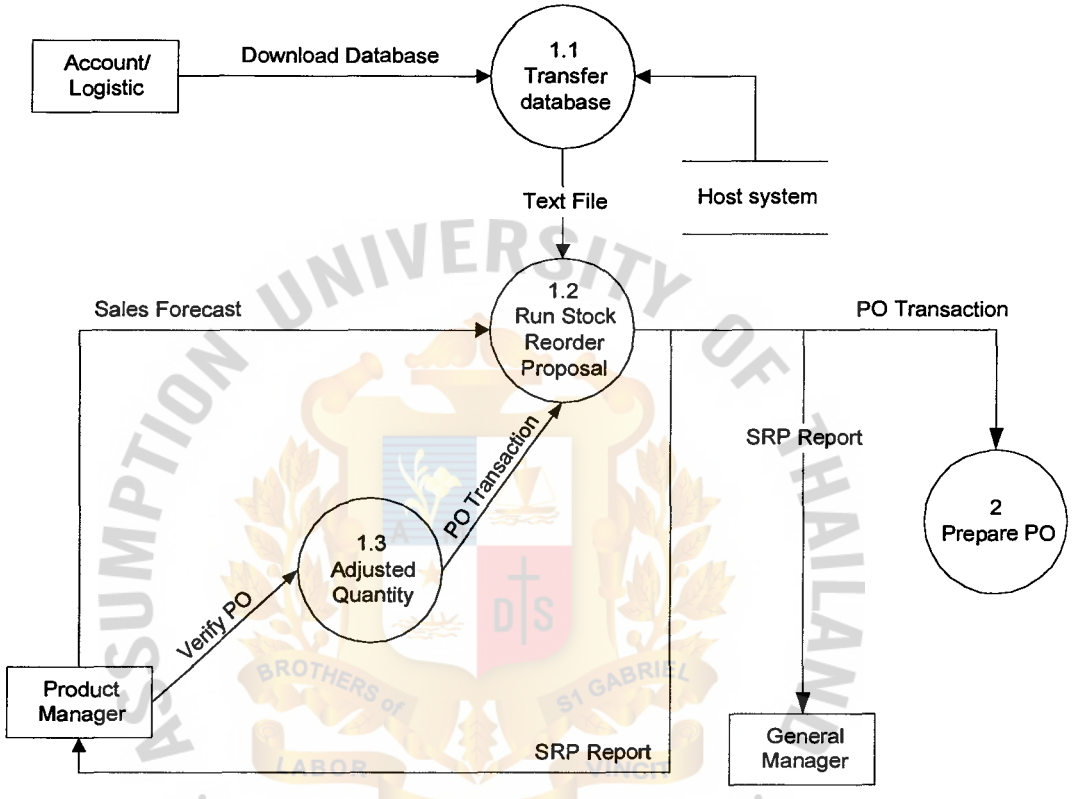

Figure 3.3. The Data Flow Diagram of Proposed System Level 1 Process1: Run SRP.

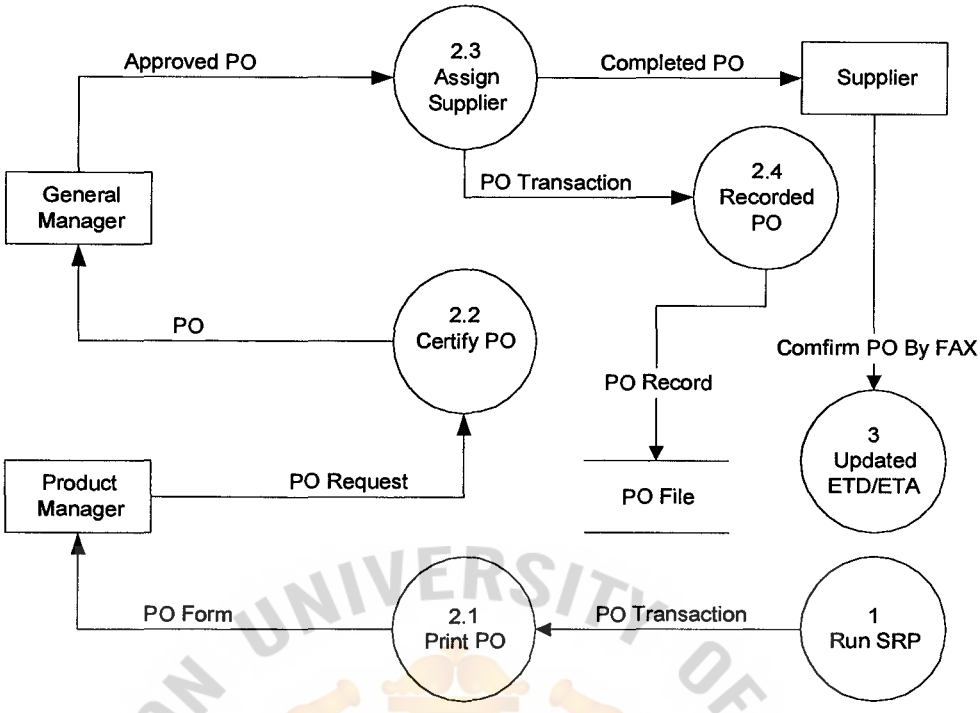

Figure 3.4. The Data Flow Diagram of Proposed System Level 1 Process2: Prepare Purchase Order.

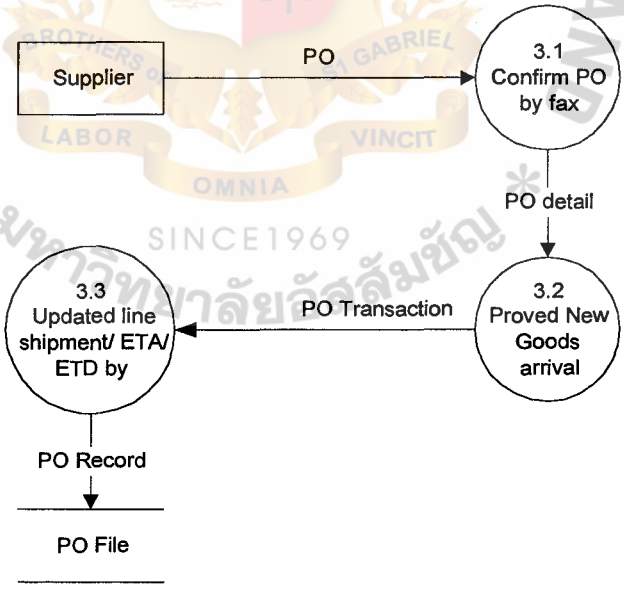

Figure 3.5. The Data Flow Diagram of Proposed System Level 1 Process3: Updated Detail of Shipment.

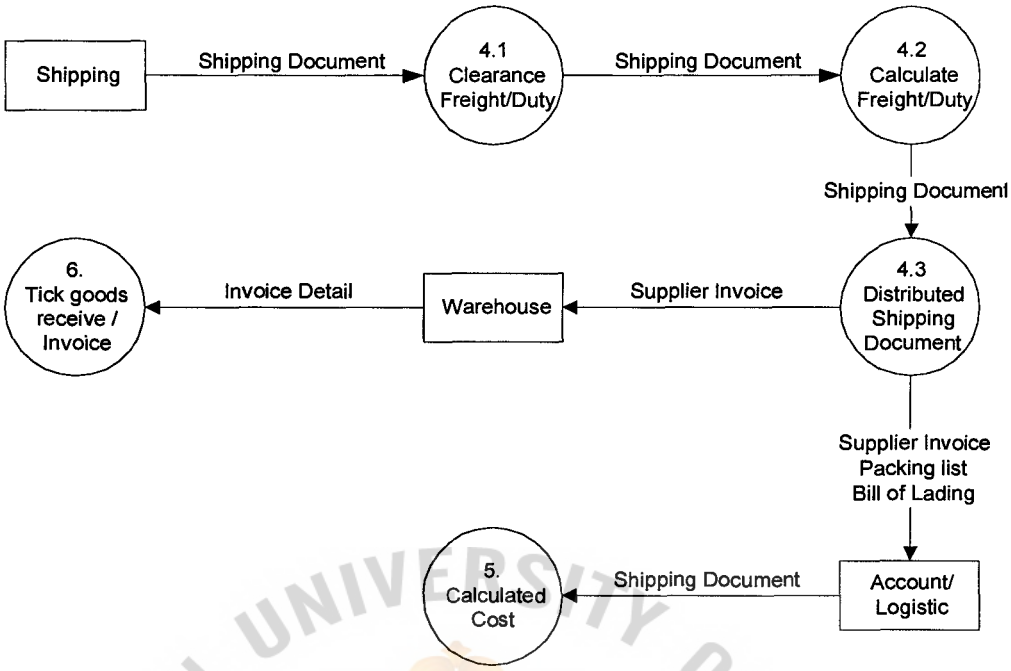

Figure 3.6. The Data Flow Diagram of Proposed System Level 1 Process4: Shipping Process.

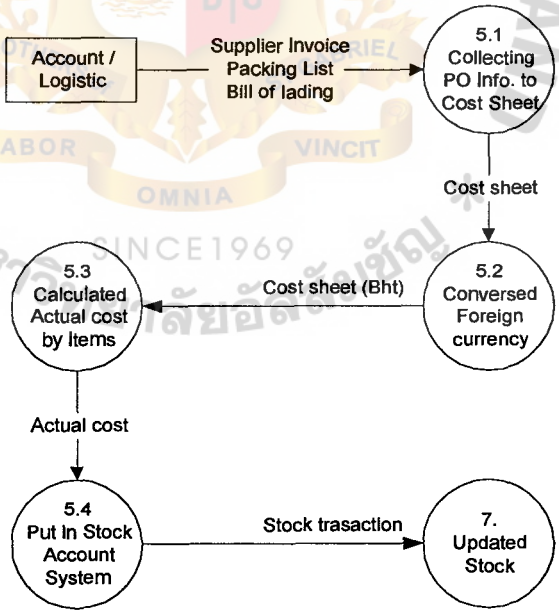

Figure 3.7. The Data Flow Diagram of Proposed System Level 1 Process5: Calculated Cost.

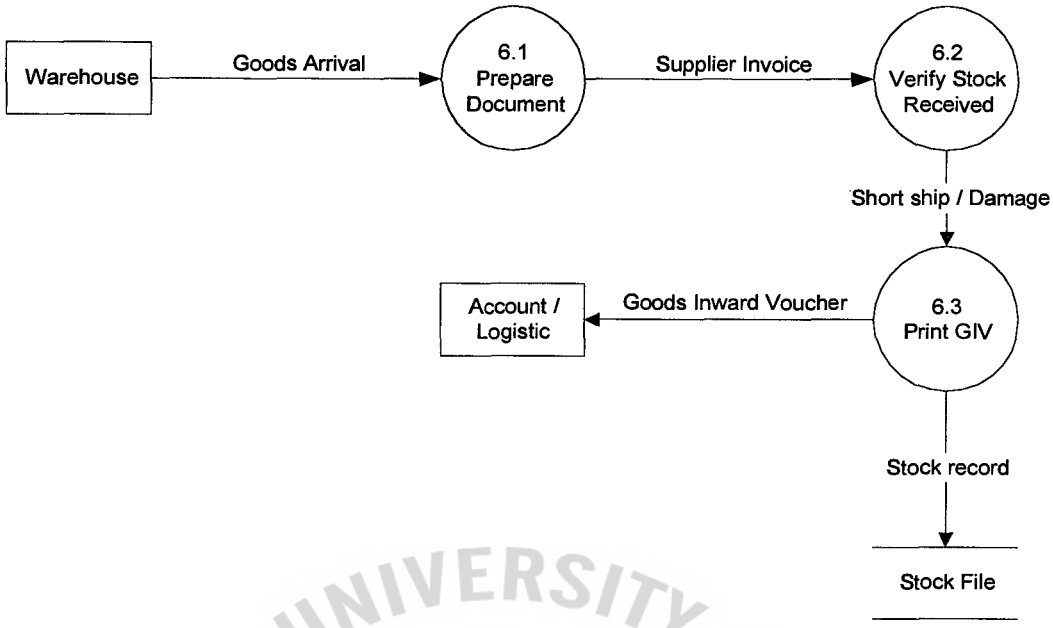

Figure 3.8. The Data Flow Diagram of Proposed System Level 1 Process6: Tick Goods Received / Invoice.

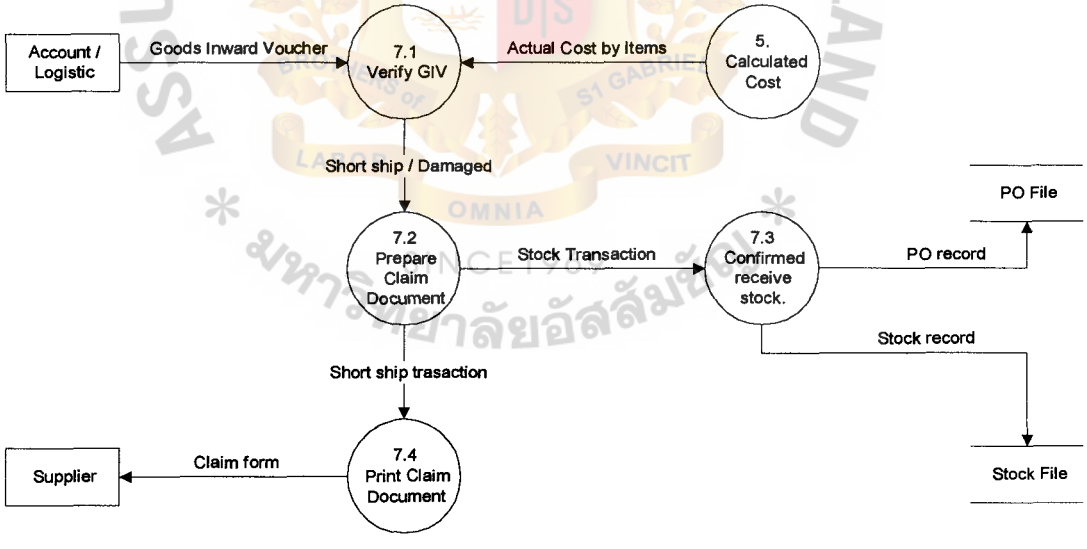

Figure 3.9. The Data Flow Diagram of Proposed System Level 1 Process7: Updated Stock.

3.2 Stock Reorder Proposal System Calculation

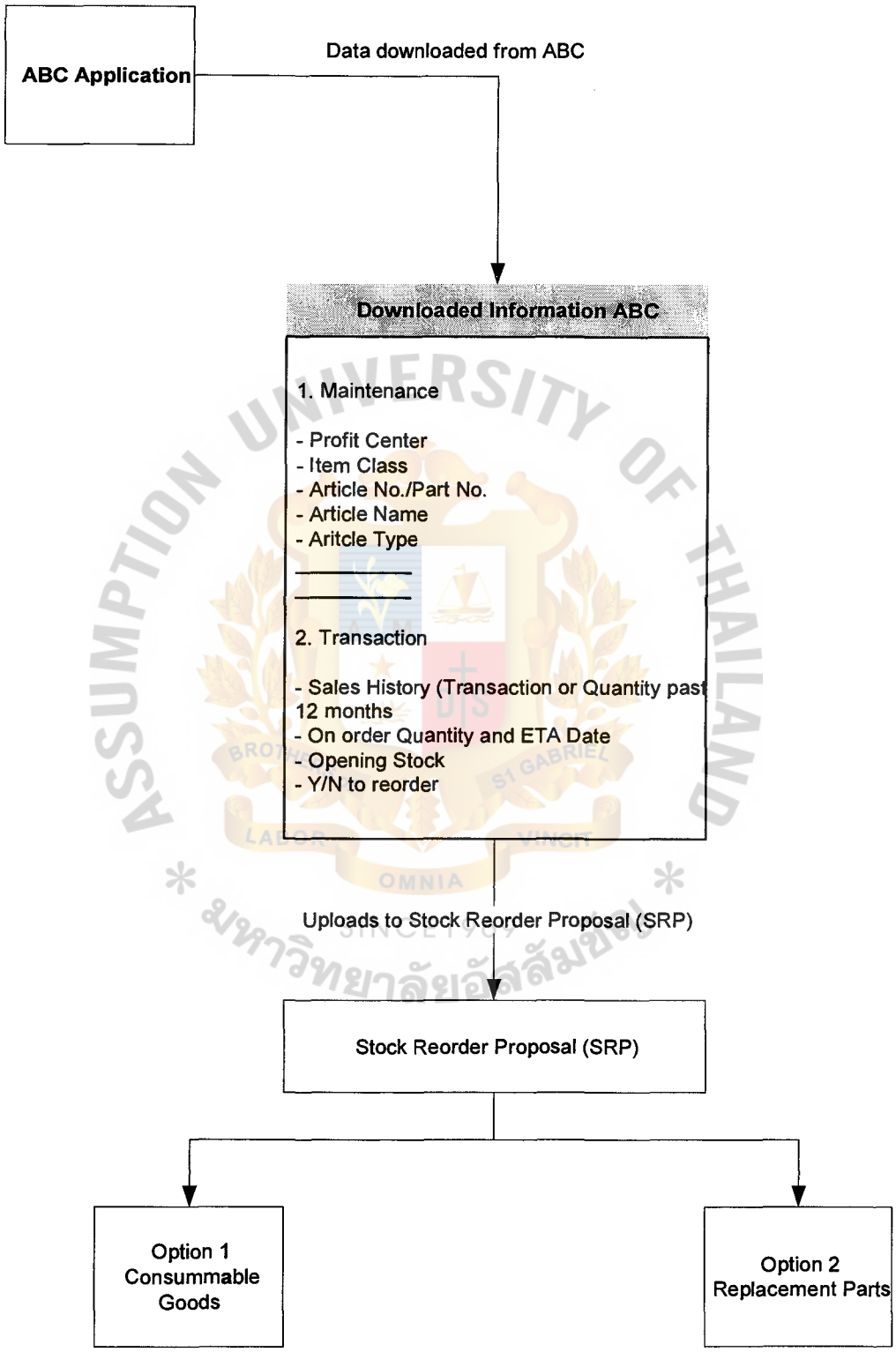

Figure 3.10. The Procedure of SRP System.

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(a) SRP Option 1 – mainly for consumable goods (without sorting by categories).

This option is used mainly for consumable goods e.g. Steering, Break pad, Films, and Air compressor, where the numbers of stock units are limited and ordering based on forecast sales is recommended. However, the forecast sales are left "blank", the system will use average monthly sales (AMS) to compute the reorder quantity pre-stock units based on the above formula. There are 2 options for AMS, based on 6 or 12 months past sales.

(b) SRP Option 2 – mainly for replacement and after market parts (sorting by categories).

Because of the large number of stock units, it may be too tedious to input forecast sales at each article level and average monthly sales (based on past 6 or 12 months) obtained from SRP's data base is used. However, for certain stock units where the AMS is not reflective of realistic sales it is recommended to use forecast sales. Where forecast sales are "blank" the system will use AMS.

Before "running" the reorder proposal, stock units are sorted by slow, medium and fast moving – see table (user defined) below. Within each category, the articles can be further sorted by high/ medium/ low values and each with different ordering criteria of stock cover – see table (user defined) below.

Table 3.1. Ordering Criteria.

Category 1. Slow Moving (SM) 0-49 Sales (in Units) During Past 6 Months

High Value 20,001 and above	Stock cover 1.0 month
Medium Value 10,000 to 20,000	Stock cover 1.0 month
Low Value < 10,000	Stock cover 1.0 month

Category 2. Medium Moving (MM) 50-100 Sales (in Units) During Past 6 Months

High Value 20,001 and above	Stock cover 1.0 months
Medium Value 10,000 to 20,000	Stock cover 1.25 months
Low Value < 10,000	Stock cover 1.5 months

Category 3. Fast Moving (FM) > 100 Sales (in Units) During Past 6 Months

High Value 20,001 and above	Stock cover 1.5 months
Medium Value 10,000 to 20,000	Stock cover 2.0 months
Low Value < 10,000	Stock cover 2.5 months

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Table 3.2. The 1st Run Based on AMS.

←-------Order Cycle--------→←Forward Mth→

	Aug.	Sep.	Oct.	Nov.	Dec.
Opening Stock	200	120	0	260	130
On Order	50	0	390		
Forecast Sales	(AMS) 130	(AMS) 130	(AMS) 130	(AMS) 130	(AMS) 130
Calculated Closing Stock	120	(10)=0	260	130	
Stock Cover			2.0		

Calculation

Stock Cover (130+130)	=	260
Sales in order cycle (130+(130-10)+130	=	380
Less Opening stock	=	(200)
On order	=	(50)
Proposed reorder quantity	=	390.

Remark:

Product manager will scrutinize the report and insert forecast sales to the months in the order cycle and forward months where forecast sales are not equal or close to average monthly sales (AMS).

Table 3.3. The 2nd Run Based on AMS/ Forecast Sales (Adjusted by Product Manager).

←-------Order Cycle--------→←Forward Mth→

	Aug.	Sep.	Oct.	Nov.	Dec.
Opening Stock	200	120	0	360	20 0
On Order	50	0	510		
Forecast Sales	(AMS) 130	(AMS) 130	(F.S) 150	(F.S) 160	(F.S) 200
Calculated Closing Stock	120	(10)=0	360	200	
Stock Cover			2.0		

Calculation

Stock Cover (160+200)	=	360
Sales in order cycle (130+(130-10)+150	=	400
Less Opening stock	=	(200)
On order	=	(50)
Proposed reorder quantity	=	510

The formula will be based on:

(a) Forecast sales in the order cycle. The order cycle comprises of the number of months from "order" month to shipment "arrival" month.

(b) The calculated closing stock for the shipment "arrival" month i.e. the last month in the order cycle, is computed by multiplying the stock cover (in months) by forward (forecast) sales.

(c) Where forecast sales are not keyed-in the months within the order cycle and forward months, the system will use the AMS.

(d) AMS is based on past 6 months or 12 months sales.

3.3 Hardware and Software Requirement

(a) Hardware

The existing hardware is Minicomputer AS/400. It is used to run Business Application. We have prepared to set up a new server to run System Reorder Proposal - SRP system and network system between clients and server.

One set Dell PowerEdge 2300

(1) CPU Pentium III 500 MHz/ 512 K Cache

(2) RAM 128 MB

(3) Hard Disk 18 GB Ultra-2/LVD SCSI 10,000 RPM Hard Drive

(4) 1.44 MB Floppy Disk Drive (3.5")

(5) Ethernet LAN Card

(6) CD ROM 40X SCSI

(7) 20 GB Internal DDS-4 Tape Backup

(b) Software

(1) Stock Reorder Proposal System

(2) Microsoft Window NT 4.0

(3) Microsoft Visual Basic 4.0

3.4 Security and Control

Computer security included the policies, procedures, tools, and techniques designed to protect a company's computer assets from accidents and intentional, or natural disasters, including accidental input or output errors, theft, break-ins, physical damage, and illegal access or manipulation.

(a) User Identification

User authentication is verified when the user starts the request, the password identification is performed. If it is a wrong password, the screen alerts the user to reentry password. If there are more than three incorrect then the system is terminated. Every user has his own password and enter his password before access to the SRP system. Each user can set the password by him. Password keyed in the system use encryption technique so that it is difficult to see real password or when someone looks at the screen while user enter the password, the password field did not show it.

(b) Authentication Level

The Privilege principle of the system is that users will be given as low an access level as possible to perform his task. There is one access control list for each object and the list shows all subjects who should have access to the object and what is their access.

(c) Physical Security

Physical security is the term used to describe protection that is provided outside the computer system. Typical physical security facilities are guards, locks, and fences to deter direct attacks. Fortunately, many physical security measures result from just good common sense.

(d) Back up

The back up should be performed. Everything on the system is copies, including system files, user files, scratch file, and directories, so the system can be regenerated after a crisis.

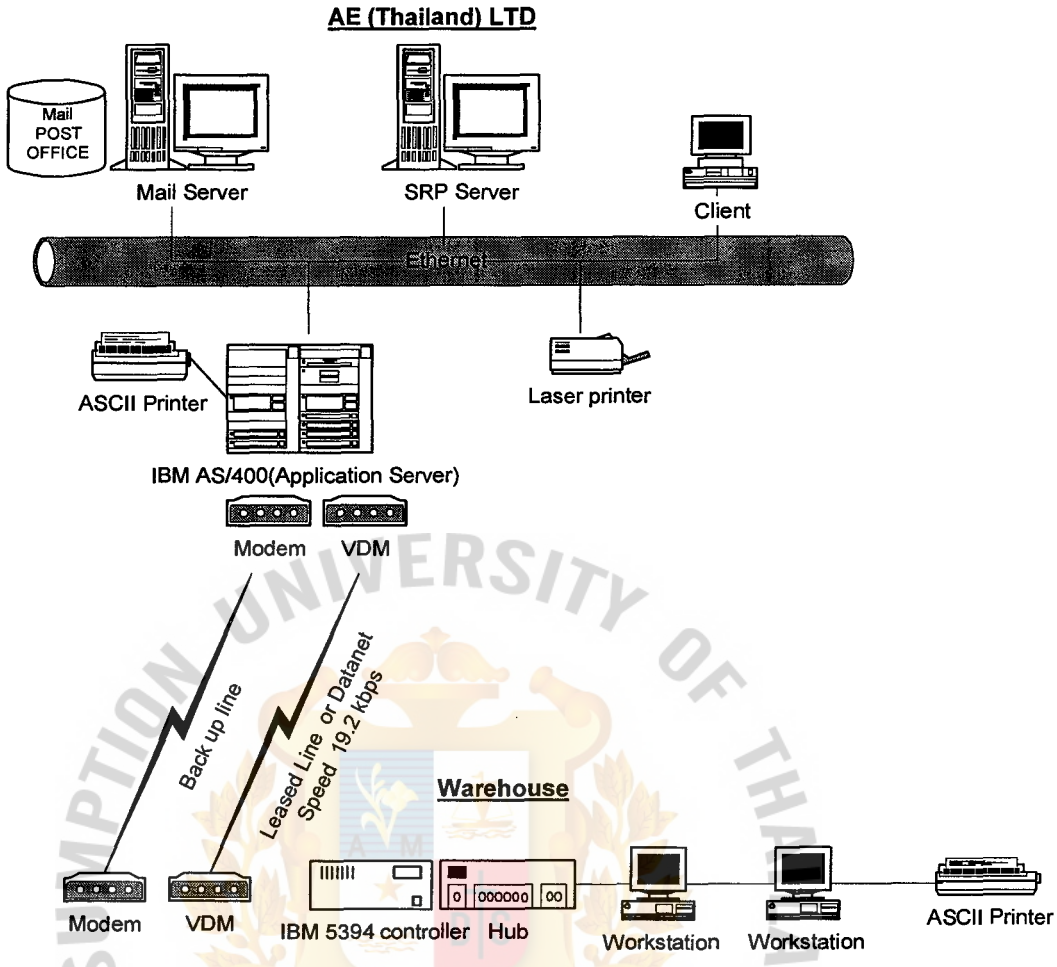

Figure 3.11. The System Network Configuration.

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IV. PROJECT IMPLEMENTATION

4.1 Project Management

The completed system has to be handed over and installed in the user's premises. This means preparing the work environment, doing the data conversion, interfacing the system into the user's work procedures and tuning the system. The planning for this was all done in the systems development phase when activities like user training, procedure development, implementation planning and data conversion planning were all completed.

The implementation phase is the most difficult one, because a technical product now has to be fitted into a human organization. The new system, Stock Reorder Proposal System, has already led to suspicion and fear while under development. Now it is going to change the way staff work and think. This stage must not be played down but must be completed in a positive, enthusiastic manner.

Conversion of the data involves setting up the files and database needed by the system. This area is problematical because one-off programs have to be written, tested and implemented to capture manual and automated data from various sources into the SRP System. The controls and checking to do this exercise must not be underestimated. Product managers will perform this first stage. They will prepare and update to table for parts categories and ordering criteria by item class, identify current or active parts by period and also identify parts in the same item class that has different suppliers and different production lead-times. Programmer will gather the necessary data from Product managers. Otherwise they have to convert database from host system to SRP System.

Although a lot of documents has already been produced (including user manuals), user-operating procedures are needed to guide the user in the proper use of the SRP System. These procedures include how to start up and close down the system, how to run SRP System and whom to contact when problems cannot be resolved. Despite the training and documentation the user has now received, there will still be a lot of handholding required in the early working sessions before user competence levels are reached.

There are 2 implementation strategies.

(a) Immediate Cutover

(b) Parallel Running

The company is able to use an immediate cutover (or "big bang") from the old to the new system, as shown in Figure 4.1, to obtain a high degree of confidence in the new system by everyone. This method will save cost and is fastest, it usually creates a period of chaos in the organization, which can lead to total rejection of the SRP System, because, once implemented, there is no going back. This method requires considerable planning because it is a very high-risk option; the project manager normally should avoid it unless there is no alternative. Parallel running method is used to ensure that the results from the new system are reliable by reconciling output from one with the other. If things go wrong, the old system is still available, and both systems can continue to be run until the new system works correctly in the user's hands. The major disadvantage is that there is a cost attached to this method, but more importantly, there is a considerable increase in the amount of work required by the user and also considerable confusion trying to run two different systems together. The project manager chooses a parallel run method to implement the SRP System.

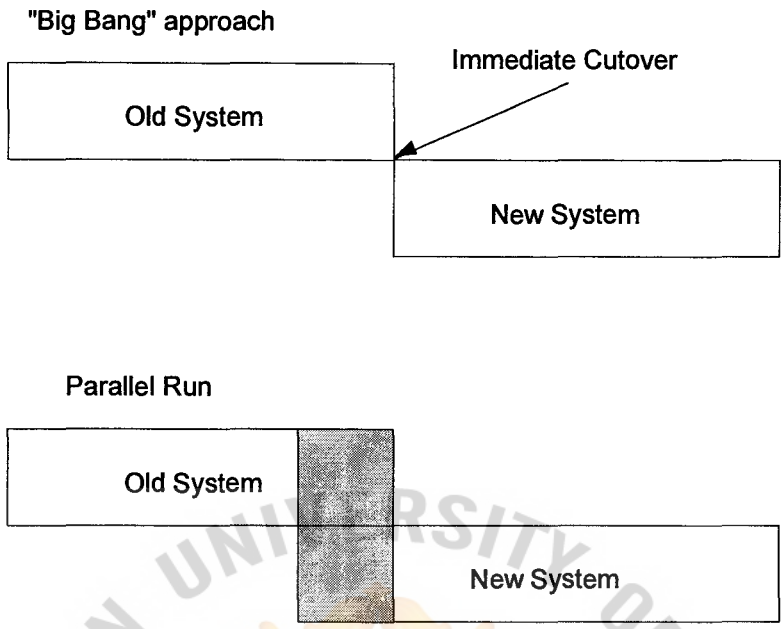

Figure 4.1. The Implementation Strategies.

4.2 Project Planning

The project planning is the important stage for project management because the project manager can know the total time consumed for the whole project. It will force the project team to follow up the activities defined in the schedule and to define the time needed for each task.

For this project, we divided the schedule into 5 phases based on System Development Life Cycle (SDLC) as follows:

(1) Feasibility Study

The feasibility study is to study about the current system, current hardware capacity and the overall operation of the related system and human resources. The investigation of problem and user requirement should be done.

(2) System Analysis and Design

The system analysis and design involved the study in detail about the current system and doing problem definition which will take time for interviewing the related function and discussion with management; after that the summary of existing system, problem and draft of proposed system will be presented to user for acceptance. The next step details of system design can be continued.

(3) System Implementation

The programming stage, system specifications that were prepared during the design stage is translated into program code, on the basis of detailed design documents for files, transaction and report layouts, and other design detailed specifications for each program in the system are prepared.

Program testing consists of testing each program separately in the system. Testing should be viewed instead as a means of location errors in programs, focusing on finding all the ways to make a program fail. Once pinpointed, problems can be corrected.

(4) Conversion

It is the process of changing from the old system to the new system. A parallel strategy is the safest conversion approach, because in the event of errors or processing disruptions, the old system can still be used as a backup. This approach is very expensive and additional staff or resources may be required to run the extra system.

(5) Production and Maintenance

After the SRP system is installed and conversion is complete, the system is said to be in production. During this stage, both users and

technical specialists are to determine how well it has met its original objectives and to decide whether any revisions or modifications are in order to review the system. Changes in hardware, software, documentation, or procedures to a production system to correct errors, meet new requirements, or improve processing efficiency are termed maintenance.

4.3 Project Implementation Schedule

The development of this project will take 6 months as shown in Figure 4.2.

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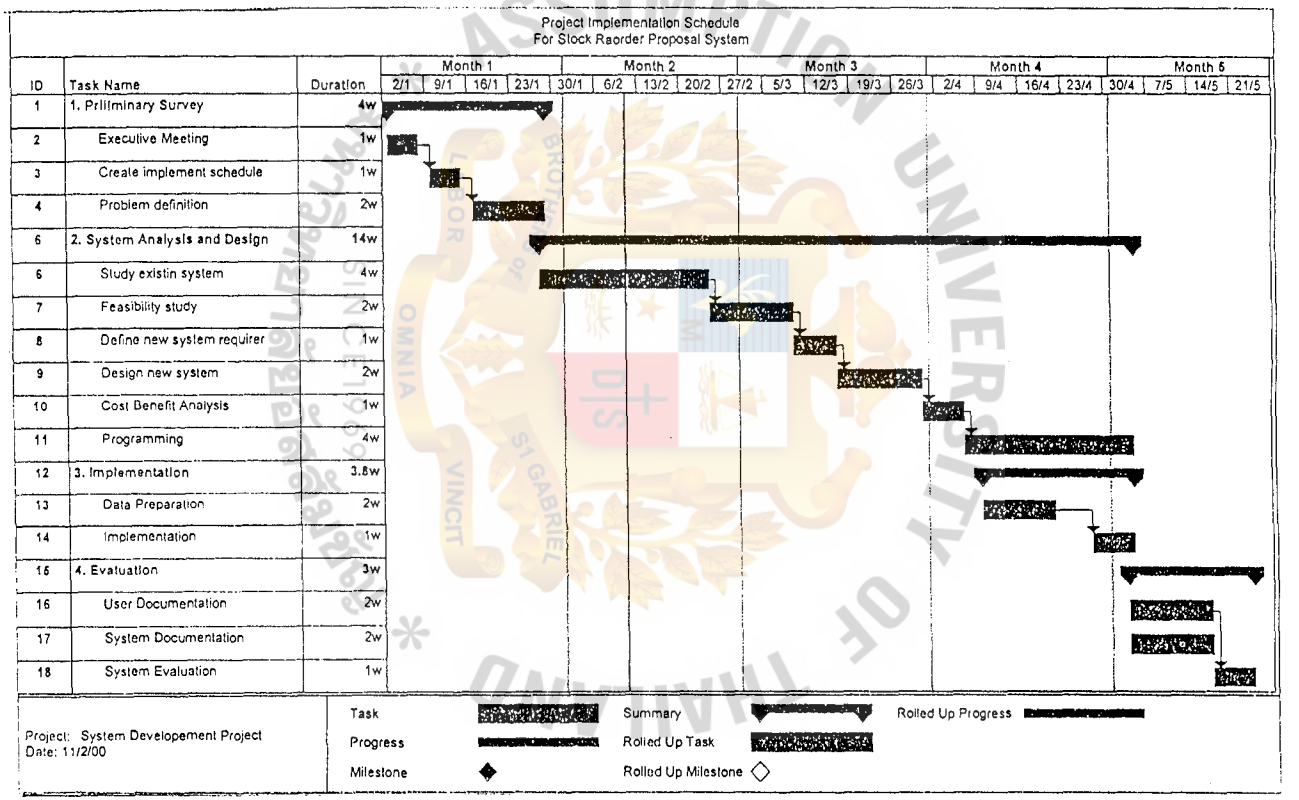

Figure 4.2. Project Implementation Schedule.

V. THE FEASIBILITY STUDY

5.1 Economic Feasibility Study

In this part, there are many methods to study feasibility in the proposed project. Once in a way is to note that tangible and intangible benefits gained from the proposed system are more than from those of the existing system. The second method will be the net present worth that discounts the value of money of both the proposed system and DO NOTHING to the present value and then compare. The third method will be the benefit to cost ratio that will compare the present value of benefit to the present value of costs to find whether the proposed system is worth investing. The payback period that is eventually last method, which is the expected number of years required in recovering the cost of investment.

The following is the process of feasibility analysis:

(1) Clarification of both tangible and intangible benefits of the proposed system.

(2) Evaluate the expected benefits of the proposed system and also the cost of the proposed system.

(3) Contrast the net present worth of the proposed system to DO NOTHING

(4) Analyze the benefit to cost ratio and the payback period

5.2 Tangible and Intangible Benefits

(a) Tangible Benefits

(1) The proposed system can reduce host system workload including operation time, system monitor, and hardware resource.

(2) Costs that can be saved from the warehouse rental, stock depreciation and bank interest, which can be wasted by setting the adequate level of stock for solving the problems.

(3) Net present worth of 902,720.063 bahts, compared to 389,677.42 bahts of DO NOTHING, shows that the proposed system is worth investing.

(4) Benefit to cost ratio of 3.3166 indicates that the proposed system is worth investing.

(5) Payback period of 2.4070 reflects that the investment on this system will be recovered in about 2 years and 5 months.

(b) Intangible Benefits

(1) Performance of work will be increased because it would be clarified in functionality and responsibility between Product Manager and Account & Logistic staff. Otherwise, it can increase the productivity in the organization since it works systematically.

(2) To reduce unnecessary task and time to prepare purchase orders and gathering data from host systems to estimate the reorder point, time for goods arrival and shipment.

(3) The proposed system can generate analytical reports for the management level in making decision and planning.

5.3 Expected Cost and Benefit of the Proposed System

From the Stock Reorder Proposal System, cost of proposed system will come from development cost, hardware & software cost, Installation cost, and operation cost. The expected benefit would come from reducing the warehouse rental, stock depreciation and interest saving.

(a) Expected Cost of the Proposed System

<u>Development Cost</u>	
System analysis and requirement determination	120,000
System Design	250,000
System Development and Implementation	195,000
Oversea Staff allowances	380,000
Local Staff allowances	350,000
Total Development Cost	1,295,000
<u>Hardware and Software Cost</u>	
Total Hardware and Software (See Table 5.1.)	273,160
<u>Installation Cost</u>	
User Training	220,000
<u>Operating Cost</u>	
Existing maintenance	250,000
Local Staff	360,000
Total Operation Cost	610,000

(b) Expected Benefits of the Proposed System

Interest saving (See Tables 5.2. and 5.3.)	6,042,000
Warehouse rental	150,000
Stock Depreciation	4,315,700
Total System Benefit	10,507,700

Table 5.1. Expected Cost of Hardware and Software.

Description	Quantity	Amount
(a) PC Server	1	130,000
(b) UPS 1000 VA	1	20,000
(c) Hub 12 ports	1	15,000
(d) Cable wiring	4	4,800
(e) Upgrade RAM	8	24,000
(f) Windows NT Server 4.0	1	64,360
(g) MS.Visual Basic	1	15,000
Total Cost of Hardware and Software		273,160

The expected cost of operation will increase by 10% every year. It will be shown on Table 5.4.

The interest savings can be calculated from defining the calculation period which in practice the company will approach 6 months to use and find the M/T (Month/Turnover) figure minus Stock Cover and then multiple interest rate. The M/T figure, means total stock of 6 months divided by monthly sales. The M/T will be as show below:

M/T (January to June) = Total Stock of January to June/ Average Monthly Sales 6 months

M/T of Engine Part = 15,005,000/2,942,000

= 5.1

M/T of Hand Tools = 3,022,000/465,000

= 6.5

M/T of Lucas = 10,305,000/1,538,000

= 6.7

The following M/T for July to December can be calculated as:

M/T (July to December) = Total Stock of July to December/

Average Monthly Sales 6 months

M/T of Engine Part = 12,550,000/2,788,888

= 4.5

M/T of Hand Tools = 5,022,000/823,000

= 6.1

M/T of Lucas = 16,305,000/2,363,000

= 6.9

Table 5.2. Interest Saving (January to June) by Stock Cover of 2 Months.

(In Bahts'000)	Avg. of 6 mths – January to June		Stock Cover	Surplus Stocks		Interest Saving
	M/T	Stock in Bahts		Stock Cover	Bahts	@14%
Engine Part	5.1	15,005	2.0	3.1	9,121	1,277
Hand Tools	6.5	3,022	2.0	4.5	2,092	293
Lucas	6.7	10,305	2.0	4.7	7,229	1,012
Total					18,442	2,582

From Tables 5.2 and 5.3, expected interest savings each year can be calculated from the summary of interest saving January to December in a year:

= 2,582,000+3,460,000

= 6,042,000 bahts

Expected interest saving for the second year, the company is based on 10% increase from last year:

= 1.1(6,042,000)

= 6,646,200 bahts

Expected interest saving for the third year:

= 1.1(6,646,200)

= 7,310,820 bahts

Expected interest saving for the fourth year:

= 1.1(7,310,820)

= 8,041,902 bahts

Expected interest saving for the fifth year:

= 1.1(8,041,902)

= 8,846,092 bahts

Expected warehouse rental saving each year that can be calculated from warehouse rental charge per year per square meter multiple reducing space segments and estimated 10% increase every year:

Warehouse Rental for Year 1 = Warehouse rental Charge per segment * (Reducing space segments)

= 100(1,500)

= 150,000 bahts

Warehouse Rental for Year 2 = 1.1(150,000)

= 165,000 bahts

Warehouse Rental for Year 3 = 1.1(165,000)

= 181,500 bahts

Warehouse Rental for Year 4 = 1.1(181,500)

= 199,650 bahts

Warehouse Rental for Year 5 = 1.1(199,650)

= 219,615 bahts

Table 5.3. Interest Saving (July to December) by Stock Cover of 2 Months.

(In Bahts'000)	Avg. of 6 mths – July to December		Stock Cover	Surplus Stocks		Interest Saving
	M/T	Stock in Bahts		Stock Cover	Bahts	@14%
Engine Part	4.5	12,550	2.0	3.5	9,761	1,367
Hand Tools	6.1	5,022	2.0	4.1	3,375	472
Lucas	6.9	16,305	2.0	4.9	11,579	1,621
Total					24,715	3,460

Expected stock depreciation saving each year that can be calculated from 10% of amount of surplus stock in each period in a year and estimated 10% increase every year as follows:

Stock Depreciation for Year 1 = 10%(Amount of Surplus Stocks)

= 10%(18,442,000+24,715,000)

= 4,315,7000 bahts

Stock Depreciation for Year 2 = 1.1(4,315,700)

= 4,747,270 bahts

Stock Depreciation for Year 3 = 1.1(4,747,270)

= 5,221,997 bahts

Stock Depreciation for Year 4 = 1.1(5,221,997)

= 5,744,197 bahts

Stock Depreciation for Year 5 = 1.1(5,744,997)

= 6,318,616 bahts

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5.4 Net Present Worth Analysis

Before going through the calculation of the net present worth, the formula for calculation should be firstly defined:

The present worth:

$$P = F / (1 + i)^n$$

The net present worth:

NPW = The summation of the present worth of each year

From the formula, the calculation of the present worth of each year involves the interest rate. In order to accurately calculate the net present worth, the interest rate of next year should be forecasted. The most suitable forecasting method for estimating the interest rate of the next year would be the Moving Average method because it is not so responsive to demand fluctuations.

The formula of the moving average can be calculated as follows:

$$MA_n = \Sigma D_i / n$$

Where

n = the number of periods in the moving average

D_i = the demand in period i

The record of the interest rate of Thailand since 1995 are as shown below:

Year 1995: 8.2 %

Year 1996: 8.9 %

Year 1997: 10.5 %

Year 1998: 8.2 %

Year 1999: 3.0 %

The forecasting interest rate would be:

$$= [8.2\ \% + 8.9\ \% + 10.5\ \% + 8.2\ \% + 3.0\ \%] / 5$$

$$= 7.76\ \%$$

For the convenience of calculation, the interest rate of 8 percent will be used instead of 7.76 percent.

Net present worth of total benefit of proposed system:

$$= 10{,}507{,}700 / (1.08)^1 + 11{,}558{,}470 / (1.08)^2 + 12{,}714{,}317 / (1.08)^3 + 13{,}985{,}749 / (1.08)^4 + 15{,}384{,}324 / (1.08)^5$$

$$= 50{,}482{,}167 \text{ bahts}$$

Net present worth of total cost of proposed system:

$$= 1{,}788{,}160 + 610{,}000 / (1.08)^1 + 671{,}000 / (1.08)^2 + 738{,}100 / (1.08)^3 + 811{,}910 / (1.08)^4 + 893{,}101 / (1.08)^5$$

$$= 4{,}718{,}784 \text{ bahts}$$

Net present worth of the proposed system:

$$= 50{,}482{,}167 - 4{,}718{,}784$$

$$= 45{,}768{,}383 \text{ bahts}$$

Net present worth of DO NOTHING would be equal the net present worth of total cost, because if that amount of money is not invested in the proposed system, it will be deposited in the bank with the interest rate of 8 percent. Consequently, the net present worth of DO NOTHING is 4,718,784 bahts.

Since the proposed system has the net present worth of 45,768,383 bahts, more than that of DO NOTHING, the proposed system is worth investing.

5.5 Benefit to Cost Ratio

The benefit to cost ratio can be calculated from the formula:

Benefit to Cost Ratio = Benefit / Cost

The benefit to cost ratio of the proposed system will be:

= 50,482,167 / 4,718,784

= 10.6981

Since the benefit to cost ratio of the proposed system is more than 1.0, this proposed system is worth investing.

5.6 Payback Period

Payback period is the expected number of years required to recover the cost of investment. It can be calculated from the formula:

Payback = Year before full recovery +
(Unrecovered cost at start of year /
Cash flow during year)

From the cumulative net cash flow in Table 5.4, the payback of the proposed system:

= 0 + 1,788,160 / (8,109,540 + 1,788,160)

= 0.1807 years

The cost of the proposed system will be recovered in about 2 months.

Table 5.4. Cash Flow of the Proposed System.

	Year					
	0	1	2	3	4	5
Benefit						
Interest		6,042,000	6,646,200	7,310,820	8,041,902	8,846,092
Warehouse Rental		150,000	165,000	181,500	199,650	219,615
Stock Depreciation		4,315,700	4,747,270	5,221,997	5,744,197	6,318,616
Total Benefit		**10,507,700**	**11,558,470**	**12,714,317**	**13,985,749**	**15,384,324**
Cost						
PC Server	130,000					
UPS 1,000VA	20,000					
Hub 12 Ports	15,000					
Cable wiring	4,800					
Upgrade RAM	24,000					
Windows NT Server 4.0	64,360					
MS Visual Basic	15,000					
Total Hardware and Software Cost	273,160					
System Analysis and Requirement Determination	120,000					
System Design	250,000					
System Development and Implementation	195,000					
Oversea Staff Allowances	380,000					
Local Staff Allowances	350,000					
Total Development Cost	1,295,000					
User Training	220,000					
Total Installing Cost	220,000					
Maintenance		250,000	275,000	302,500	332,750	366,025
Local Staff		360,000	396,000	435,600	479,160	527,076
Total Operating Cost		610,000	671,000	738,100	811,910	893,101
Total Cost	**1,788,160**	**610,000**	**671,000**	**738,100**	**811,910**	***893,101***
Net Cash Flows	**-1,788,160**	**9,897,700**	**10,887,470**	**11,976,217**	**13,173,839**	**14,491,223**
Cummulative Cash Flows	**-1,788,160**	**8,109,540**	**18,997,010**	**30,973,227**	**44,147,066**	**58,638,288**

Interest Rate	8.0%
NPW	45,763,382
NPW of Benefits	50,482,167
NPW of Costs	4,718,784
B/C	10.6981
Payback Period	0.1807

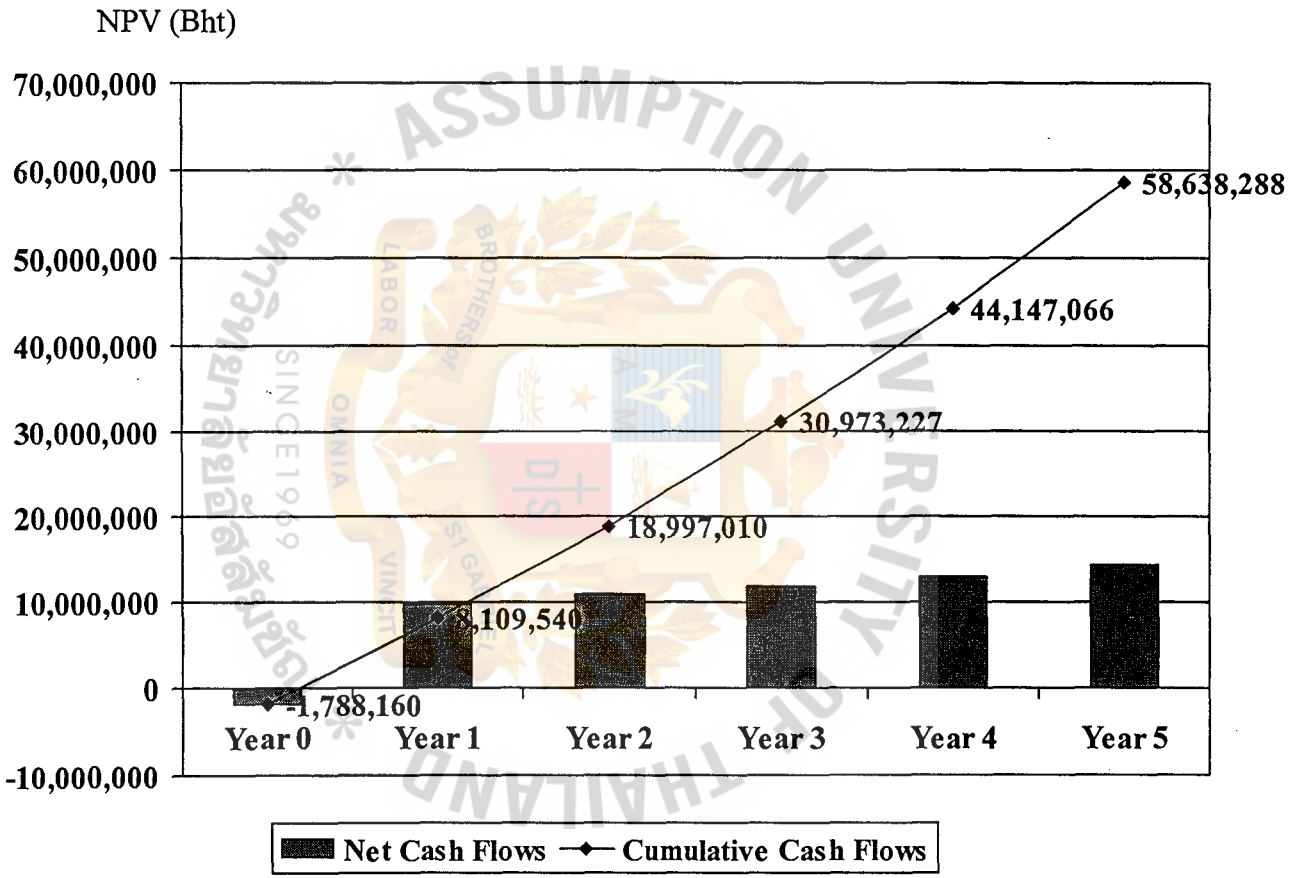

Figure 5.1. Graph Showing Net Cash Flows and Cumulative Cash Flows.

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VI. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

This project is concerned with the Stock Reorder Proposal System. The proposed system will be added on the existing system. The existing procedure involves manual work, daily check stock, and the product manager using his experience to do the reordering point and also estimating the quantity to be ordered. Therefore the company has to develop the Stock Reorder Proposal System to handle the reorder quantity and generate purchasing orders to suppliers.

Because the company has two automotive product lines, this system has been designed to support two options. First option is used mainly for consumable goods such as steering, break pad, films, and air compressor, where the number of stock units are limited and ordering based on forecast sales is recommended. The second option is used mainly for replacement and after market parts that the large number of stock units, may be too tedious to input forecast sales at each article level and average monthly sales. Certain stock units where the average monthly sales are not reflective of realistic sales is recommended to use forecast sales. Where forecast sales are "blank" the system will use average monthly sales.

The organization chart and chain of command from the existing system must be reordered to cope with the new system. From the ambiguous line of command, each department has to have clear functions and responsibility. There will be no overlaps and overriding authorities in each department and even in each title or position.

The testing and project implementation schedules are provided in the project. For future need, the company can easily refer to the manual and edit or adapt the system to cope with other situations.

By using system development tools such as data flow diagrams, information flow of the proposed system can be designed and described. The database requirement, screen design, and output reports are shown in Appendix A-G for this proposed system.

6.2 Recommendations

After running this proposed system connected to existing system, it appears that the Stock Reorder Proposal System can reduce unnecessary work to prepare Purchase Order and before long time the number of stock will decrease and be in a sufficient level. Accordingly company can save the expenditure with the bank interest, the cash flows of the company grow up, flexible and will have more confidence to run business during the economic crisis.

There are some recommendations that are necessary for the Stock Reorder Proposal System. During the economy not having stabilization, the company might use the qualitative forecasting methods to define the interest rate to calculate the NPW. For the next 5 years, the average interest rate should be about 5%. However this project will use interest rates of 8% using the quantitative forecasting method and moving average to compute its rate.

The proposed system is not suitable for a bulk order of large quantities with multiple deliveries (e.g. Indent or Direct Shipment).

Implementation should be conducted at the end of the project to determine requirement, expectation and development evaluation. The use of attitude survey method will be best suited to scrutinize to reveal people side of the system. For further developments, the company can do some enhancement part in order to cope with user requirements such as the function to analyze the best supplier for that reorder point, supplier information, and automatically download database from host system.

APPENDIX A

FUNCTIONALITY OF IMPORTING FILE

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Functionality of Importing File

Form Design: frmMonFile

This Module process the downloaded data files from the main system and the information is stored in SRP database by the desired format.

There are two options that are available in this Module as below:

(a) Default File Location

(b) Select File Location

Option "Default File Location" allows choosing what type of the file to be processed and the file path already predefined in the table called [ImpFile]. This option allows importing all type of files by choosing the option "All File Above" from the File Type Column.

The option "Select File Location" is used for files importing that are not located at the default directory by default name. Those defaulted files are already predefined in the table [ImpFile]. In other word, it allows to select the file that is not located at the default directory by choosing from the "Source File" Frame. This option just allowed to process only one type of the file at the one time.

Please is caution that the importing process of the Article Master file must be done at the latest stage during each month's uploading process. It is because a lot of processing are involved with some other files like "Actual Monthly Sales", that must be uploaded earlier in order to give the precise figures for calculating and processes of uploading Article Master File.

Table A.1. The Example of the Table [ImpFile] for Importing.

FileNo	FileName	FilePath
1	Opening Stock File (CKOpnStk)	C:\Srp\ImpFl\CKOpnStk
2	Monthly Actual Sales File – Units(CKSlsAcm)	C:\Srp\ImpFl\CKSlsAcm
3	Outstanding Purchase Orders File (CKOutPOM)	C:\Srp\ImpFl\CKOutPOM
4	Article Conversion Master File (CKMasCn)	C:\Srp\ImpFl\CKMasCn
5	Product Group Master File (CKMasPG)	C:\Srp\ImpFl\CKMasPG
6	Product Class Master File (CKMasCC)	C:\Srp\ImpFl\CKMasCC
7	Article Master File (CKArtMas)	C:\Srp\ImpFl\CKArtMas
8	Purge Previous Month Records	
9	All Files Above	C:\Srp\ImpFl\
10	Sales Forecast File	C:\Srp\ImpFl\
11	Actual Sales File (CKSlsAcy)	C:\Srp\ImpFl\ckSlsAcy

1. Opening Stock File

(a) Query Set - TCHLIBU/CKOpnStk2

(b) Data File - C:\SRP|ImpFl\CKOpnStk

(c) Temp Table - Table [SrOpnStk]

(d) Destination - Table [SrSlsAct]

(e) Processing - Table [SrOpnStk] is use to hold the information from the data file and updates the Opening Stock column by the specific month of the table [SrSlsAct]. It must key in the year and month to specify the current report period of the data file before running. For examples, key in 199805 in the year textbox will update the opening stock figures into the column 'ArtQty04' of [SrSlsAct] table.

2. Monthly Actual Sales File

(a) Query Set - TCHLIBU/CKSlsActM1, TCHLIBU/CKSlsActM2

(b) Run Query - Run the query 'CKSlsActM1' first and then run second query 'CKSlsActM2' sequentially

(c) Data File - C:\SRP\ImpFl\CKSlsAcm

(d) Temp Table - Table [TmpActM]

(e) Destination - Table [SrSlsActM], [SrSlsAct]

(f) Processing - Table [TmpActM] is used to hold the information from the data file and updates the Opening Stock column by the specific month of the table [SrSlsActM] and the Average Monthly Sales column in [SrSlsAct]. The data is stored in the previous month in the table. For examples, if the current processing month is June then data is stored in ArtQty05 of table [SrSlsActM], and the Average Monthly Sales past 6 month is stored in 'AMSQty05' of [SrSlsAct].

3. **Outstanding Purchase Orders File**

(a) Query Set - TCHLIBU/CKOutPOM

(b) Data File - C:\SRP\ImpFl\CKOutPOM

(c) Destination - Table [SrOutPO]

(d) Processing - Information is uploaded directly from the data file. The data is stored only Department, Article number, branch code, ETA, Purchase Order number and Quantity by transaction.

4. **Article Conversion Master File (Unit of Measurement - UOM)**

(a) Query Set - TCHLIBU/CKMasCn

(b) Data File - C:\SRP\ImpFl\CKMasCn

(c) Destination - Table [SrMasCn]

(d) Processing - Information is uploaded directly from the data file. This file will be used for converting unit of measurement between purchasing unit

and stock unit. For examples, we are able to define that item A 1 Box equals 12 packs or 1 Drum equals 25 Kilograms.

5. **Product Group Master File**

(a) Query Set - TCHLIBU/CKMasPG

(b) Data File - C:\SRP\ImpFl\CKMasPG

(c) Destination - Table [SrMasPG]

(d) Processing - Information is uploaded directly from the data file.

For examples, Automotive department might be comprised of Break system product group and Engine product group.

6. **Product Class Master File**

(a) Query Set - TCHLIBU/CKMasCC

(b) Data File - C:\SRP\ImpFl\CKMasCC

(c) Destination - Table [SrMasCC]

(d) Processing - Information is uploaded directly from the data file.

For examples, under Product Group will be Product Class.

7. **Article Master File**

(a) Query Set - TCHLIBU/CKArtMas

(b) Data File - C:\SRP\ImpFl\CKArtMas

(c) Temp File - Table [TmpUpLda], [TmpArtM2]

(d) Destination - Table [SrArtMas], [ArtMas2]

(e) Processing - [TmpUpLda] and [TmpArtM2] are temporary table for uploading processing, [TmpUpLda] consists of Total sales and Average Monthly Sales figures, [TmpArtM2] play a role to hold the information like main table [ArtMas2] for some further processing. The main table [SrArtMas] is uploaded directly from the data file and all old records in the table will be over

written. Another article main table [ArtMas2] is not over written, but it is allowed to update only certain column. For examples, the fields 'PrnRop' (Y/N to run Reorder Proposal) and 'Prnfcst' (Y/N to print Forecast Sales) in [ArtMas2] are not updated during uploading process, but, it can be changed in 'File maintenance' Module. All articles are automatically divided into specific categories that are predefined in the table [Criteria]. During the processing, the Status is updated to '1' in [Systable] for avoiding some other user to run with the same function. The Status column would be uploaded to '0' once it has been completed. If some body try to use with the same function, the system will prompt out the message says that the system is busy, please kindly change the status to '1' if failed to run the process caused by the situation as mentioned.

8. **Purge Previous Month Records**

(a) Source Table - Table [SrRopQty], [CrtRopM1]

(b) Destination - Table [RopQtyHis], [RopQtyHisCrt]

(c) Processing - Purge previous two months' records from [SrRopQty] to [RopQtyHis], and [CrtRopM1] to [RopQtyHisCrt] according to the transaction date in the source table.

9. **All Files above**

(a) Processing - This option will be selected when user would like to upload all files ('Opening Stock File' until 'Actual Sales File').

10. **Actual Sales File**

(a) Query Set - TCHLIBU/CKSlsAcy

(b) Data File - C:\SRP\ImpFl\CKSlsAcy

(c) Temp Table - Table [TmpActy]

(d) Destination - Table [SlsAct]

(e) Processing - Table [TmpActy] is used to hold the information from the data file and updates the ArtQty column by the specific month of the table [SrSlsAct] and the Average Monthly Sales column in [SrSlsAct]. The data is stored in the previous month in the table and update column total sales 6 months and total sales 12 months.

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APPENDIX B

DATA FILE FORMAT

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Data File Format (Downloaded from ABC Application)

1. Article Unit or Measure

Source code – FunArtCn

```
ls_DepNo = Mid(TextLine, 1, 3)

ls_ArtNo = Mid(TextLine, 4, 10)

ld_Cffact = Val(Mid(TextLine, 14, 6))

lr_tbl.AddNew

        If ls_DepNo <> "" Then lr_tbl!DepNo = ls_DepNo

        If ls_ArtNo <> "" Then lr_tbl!ArtNo = ls_ArtNo

      lr_tbl!CffAct = ld_Cffact

lr_tbl.Update
```

Defaulted Data file

CKMasCn

Started position & Field lengths

DepNo (Department No)	-	started: 1	length: 3
ArtNo (Article No)	-	started: 4	length: 10
CffAct(Article Unit conversion)	-	started:14	length: 6

2. Article Master File

Source code – FunArtMas

```
ls_DepNo = Trim(Mid(TextLine, 1, 3))

ls_ArtNo = Trim(Mid(TextLine, 4, 10))

ls_ArtName = Trim(Mid(TextLine, 14, 30))
```

```
ls_PartNo = Trim(Mid(TextLine, 44, 20))
ls_ArtUnit = Trim(Mid(TextLine, 64, 4))
ls_ArtPcls = Trim(Mid(TextLine, 68, 4))
ls_ArtSubPC = Trim(Mid(TextLine, 72, 4))
ls_ArtType = Trim(Mid(TextLine, 76, 2))
ls_SprCode = Trim(Mid(TextLine, 78, 10))
ld_volctn = Val(Trim(Mid(TextLine, 88, 9)))
ld_ArtSupPc = Val(Trim(Mid(TextLine, 97, 17)))
ls_ArtPCTyp = Trim(Mid(TextLine, 114, 3))
ls_ArtApPfx = Trim(Mid(TextLine, 117, 3))
ls_ArtApNum = Trim(Mid(TextLine, 120, 6))
ls_ArtApSfx = Trim(Mid(TextLine, 126, 3))
ld_ArtWt = Val(Trim(Mid(TextLine, 129, 13)))
ls_ArtDepre = Trim(Mid(TextLine, 142, 1))
ls_Model = Trim(Mid(TextLine, 143, 20))
        lr_tbl.AddNew
      If ls_DepNo <> "" Then lr_tbl!DepNo = ls_DepNo
      If ls_ArtNo <> "" Then lr_tbl!ArtNo = ls_ArtNo
      If ls_ArtName <> "" Then lr_tbl!ArtName = ls_ArtName
      If ls_PartNo <> "" Then lr_tbl!PartNo = ls_PartNo
      If ls_ArtUnit <> "" Then lr_tbl!ArtUnit = ls_ArtUnit
      If ls_ArtPcls <> "" Then lr_tbl!ArtPcls = ls_ArtPcls
      If ls_ArtSubPC <> "" Then lr_tbl!ArtsubPC = ls_ArtSubPC
      If ls_ArtType <> "" Then lr_tbl!ArtType = ls_ArtType
      If ls_SprCode <> "" Then lr_tbl!SprCode = ls_SprCode
```

```
lr_tbl!VolCtn = ld_volctn
lr_tbl!ArtSprPC = ld_ArtSupPc
  If ls_ArtPCTyp <> "" Then lr_tbl!ArtPCTyp = ls_ArtPCTyp
If ls_ArtApPfx <> "" Then lr_tbl!ArtApPfx = ls_ArtApPfx
If ls_ArtApNum <> "" Then lr_tbl!ArtApnum = ls_ArtApNum
If ls_ArtApSfx <> "" Then lr_tbl!ArtApSfx = ls_ArtApSfx
lr_tbl!ArtWT = ld_ArtWt
If ls_ArtDepre <> "" Then lr_tbl!ArtDepre = ls_ArtDepre
If ls_Model <> "" Then lr_tbl!ModelNo = ls_Model
lr_tbl.Update
```

Defaulted Data file

CKArtMas

Started position & Field lengths

DepNo (Department No.)	-	started: 1	length: 3
ArtNo (Article No.)	-	started: 4	length: 10
ArtName (article Name)	-	started: 14	length: 30
PartNo (Part No.)	-	started: 44	length: 20
ArtUnit (UOM)	-	started: 64	length: 4
ArtPcls (Product Class)	-	started: 68	length: 4
ArtSubPc (Sub Product Class)	-	started: 72	length: 4
ArtType (Article Type)	-	started: 76	length: 2
SprCode (Supplier Code)	-	started: 78	length: 10
VloCtn (Article Volume)	-	started: 88	length: 9

ArtSprPC (Article Supplier Price)	-	started: 97 length: 17
ArtPCTyp (Article Price Type)	-	started: 114length: 3
ArtApPfx (Article AP Prefix)	-	started: 117length: 3
ArtApNum (Article AP No.)	-	started: 120length: 6
ArtApSfx (Article AP Suffix)	-	started: 126length: 3
ArtWT (Article Weight)	-	started: 129length: 13
ArtDepre (Allow Depreciation)	-	started: 142length: 1

3. Monthly Actual Sales

Source code – FunMthAct

```
Do While Not EOF(1) ' Loop until end of file.
    Line Input #1, TextLine ' Read line into variable.
    RecLen = Len(TextLine) + RecLen + 2
    ProgressBar1.Value = RecLen
    ls_GlPeriod = Trim(Mid(TextLine, 5, 6))
    li_HldPd = Int(Right(ls_GlPeriod, 2))
    ls_DepNo = Trim(Mid(TextLine, 11, 3))
    ls_BrCode = Trim(Mid(TextLine, 14, 2))
    ls_ArtNo = Trim(Mid(TextLine, 16, 10))
    ld_ArtQty = Val(Trim(Mid(TextLine, 26, 12)))
    ld_Ams06 = 0
    ld_AMS12 = 0
    ls_HldGLPd = Left(ls_GlPeriod, 6)
    lr_tbl.AddNew
        lr_tbl!DepNo = ls_DepNo
```

```
            lr_tbl!BrCode = ls_BrCode
            lr_tbl!ArtNo = ls_ArtNo
            lr_tbl!GLPeriod = ls_HldGLPd
            lr_tbl!ArtQty01 = ld_ArtQty
        lr_tbl.Update
Loop
```

Defaulted Data file

CKS1sAcM

Started position & Field lengths

GLPG (product Group)	-	started: 1	length: 4
GLPeriod (Record Period)	-	started: 5	length: 6
DepNo (Department No.)	-	started: 11	length: 3
BrCode (Branch Code)	-	started: 14	length: 2
ArtNo (Article No.)	-	started: 16	length: 10
ArtQty (Monthly sales figure)	-	started: 26	length: 12

4. Opening Stock

Source code – FunOpnStk

```
ls_Ropiup = Trim(txtRptPd.Text)
li_HldPd = Int(Right(ls_Ropiup, 2)) - 1
ls_Year = Right(ls_Ropiup, 4)
If li_HldPd = 0 Then
    ls_Year = Trim(Str(Int(Left(ls_Ropiup, 4)) - 1))
```

```
        li_HldPd = 12
End If
ls_CurPd = Left(ls_Ropiup, 6)
ls_HldStr = "ArtQty" + Format(li_HldPd, "00")
ls_DepNo = Trim(Mid(TextLine, 3, 3))
ls_BrCode = Trim(Mid(TextLine, 6, 2))
ls_ArtNo = Trim(Mid(TextLine, 8, 10))
ld_ArtQty01 = Val(Trim(Mid(TextLine, 18, 16)))
ls_First = Mid(TextLine, 1, 1)

 '------Add record to SrOpnStk
If ls_First = "1" Then
        lr_tbl.AddNew
                lr_tbl!DepNo = ls_DepNo
                lr_tbl!BrCode = ls_BrCode
                lr_tbl!ArtNo = ls_ArtNo
                lr_tbl!RopIUp = ls_CurPd
                lr_tbl!ArtQtyP = ld_ArtQty01
        lr_tbl.Update
EndIf
```

Defaulted Data file

CKOpnStk

Started position & Field lengths

Line Status (load only stat = '1')	-	started: 1	length: 2
DepNo (Department)	-	started: 3	length: 3
BrCode (Branch Code)	-	started: 6	length: 2
ArtNo (Article No.)	-	started: 8	length: 10
ArtQtyP (Opening Stock Figure)	-	started: 18	length: 15

5. Outstanding Purchase Order

Source code – FunOutPo

```
Do While Not EOF(1) ' Loop until end of file.
    Line Input #1, TextLine ' Read line into variable.
  RecLen = Len(TextLine) + RecLen + 2
  ProgressBar1.Value = RecLen
  ls_DepNo = Trim(Mid(TextLine, 4, 3))
  ls_ArtNo = Trim(Mid(TextLine, 7, 10))
  ls_BrCode = Trim(Mid(TextLine, 17, 2))
  ls_Speta = Trim(Mid(TextLine, 19, 8))
  ls_SporNo = Trim(Mid(TextLine, 27, 8))
  ld_SporQty = Val(Trim(Mid(TextLine, 35, 10)))
  ls_OrdDate = Trim(Mid(TextLine, 49, 8))
  'If ls_OrdDate <> "" Then
      ' li_Mth = Int(Mid(ls_OrdDate, 5, 2)) + 1
      ' If li_Mth > 12 Then
      '  li_Mth = 1
      ' End If
```

```
' ls_OrdDate = Left(ls_OrdDate, 4) + Format(li_Mth, "00") + Right(ls_OrdDate,
2)
  'End If
'If ls_Speta = "" Then
        'ls_Speta = ls_OrdDate
'End If
If ld_SporQty > 0 Then
lr_tbl.AddNew
        If ls_DepNo <> "" Then lr_tbl!DepNo = ls_DepNo
        If ls_ArtNo <> "" Then lr_tbl!ArtNo = ls_ArtNo
        If ls_BrCode <> "" Then lr_tbl!BrCode = ls_BrCode
        If ls_Speta <> "" Then lr_tbl!SPETA = ls_Speta
        If ls_SporNo <> "" Then lr_tbl!SPOrdNo = ls_SporNo
        If ls_OrdDate <> "" Then lr_tbl!PODate = ls_OrdDate
        lr_tbl!SPOrdQty = ld_SporQty
        lr_tbl.Update
End If
Loop
```

Defaulted Data file

CKOutPOM

Started position & Field lengths

*GLPG (Prod Group)	-	started: 1	length: 3
DepNo (Department No.)	-	started: 4	length: 3

ArtNo (Article No.)	-	started: 7	length: 10
BrCode (Branch Code)	-	started: 17	length: 2
SPETA (Estimated Delivery Date)	-	started: 19	length: 8
SPOrdNo (Order No)	-	started: 27	length: 8
SpOrdQty (On Order Qty)	-	started: 35	length: 10
*ArtUnit (Article Unit)	-	started: 45	length: 4
SpOrdDate (Date of Order created)	-	started: 49	length: 8

6. Product Class

Source code – FunPC

```
Do While Not EOF(1) ' Loop until end of file.
        Line Input #1, TextLine ' Read line into variable.
      RecLen = Len(TextLine) + RecLen + 2
      ProgressBar1.Value = RecLen
      ls_PC = Trim(Mid(TextLine, 1, 4))
      ls_PCName = Trim(Mid(TextLine, 5, 30))
      ls_PG = Trim(Mid(TextLine, 35, 3))
      lr_tbl.AddNew
      If ls_PC <> "" Then lr_tbl!GLCC = ls_PC
      If ls_PCName <> "" Then lr_tbl!GLCCName = ls_PCName
      If ls_PG <> "" Then lr_tbl!GLPG = ls_PG
      lr_tbl.Update
Loop
```

Defaulted Data file

CKMasCC

Started position & Field lengths

GLCC (Product Class)	-	started: 1	length: 4
GLCCName (Product Name)	-	started: 5	length: 30
GLPG (Product Group)	-	started: 35	length: 3

7. Product Group

Source code – FunPG

```
Do While Not EOF(1) ' Loop until end of file.
        Line Input #1, TextLine ' Read line into variable.
      RecLen = Len(TextLine) + RecLen + 2
      ProgressBar1.Value = RecLen
      ls_DepNo = Trim(Mid(TextLine, 1, 3))
      ls_PG = Trim(Mid(TextLine, 4, 3))
      ls_PGName = Trim(Mid(TextLine, 7, 30))
      lr_tbl.AddNew
      If ls_DepNo <> "" Then lr_tbl!DepNo = ls_DepNo
      If ls_PG <> "" Then lr_tbl!GLPG = ls_PG
      If ls_PGName <> "" Then lr_tbl!GLPGName = ls_PGName
      lr_tbl.Update
Loop
```

Defaulted Data file

CKMasPG

Started position & Field lengths

DepNo (Department No)	-	started: 1	length: 3
GLPG (Product Group)	-	started: 4	length: 3
GLPGName (Product Name)	-	started: 7	length: 30

8. Monthly Actual Sales

Source code – FunMthAct12

```
Do While Not EOF(1) ' Loop until end of file.
        Line Input #1, TextLine ' Read line into variable.
      RecLen = Len(TextLine) + RecLen + 2
      ProgressBar1.Value = RecLen
      For i = 1 To 12
      ld_ArtQty(i) = 0
  Next
      ls_GlPeriod = Trim(Mid(TextLine, 5, 6))
      ls_DepNo = Trim(Mid(TextLine, 11, 3))
      ls_BrCode = Trim(Mid(TextLine, 14, 2))
      ls_ArtNo = Trim(Mid(TextLine, 16, 10))
      ld_ArtQty(1) = Val(Trim(Mid(TextLine, 26, 12)))
      ld_ArtQty(2) = Val(Trim(Mid(TextLine, 38, 12)))
      ld_ArtQty(3) = Val(Trim(Mid(TextLine, 50, 12)))
      ld_ArtQty(4) = Val(Trim(Mid(TextLine, 62, 12)))
```

```
        ld_ArtQty(5) = Val(Trim(Mid(TextLine, 74, 12)))
        ld_ArtQty(6) = Val(Trim(Mid(TextLine, 86, 12)))
        ld_ArtQty(7) = Val(Trim(Mid(TextLine, 98, 12)))
        ld_ArtQty(8) = Val(Trim(Mid(TextLine, 110, 12)))
        ld_ArtQty(9) = Val(Trim(Mid(TextLine, 122, 12)))
        ld_ArtQty(10) = Val(Trim(Mid(TextLine, 134, 12)))
        ld_ArtQty(11) = Val(Trim(Mid(TextLine, 146, 12)))
        ld_ArtQty(12) = Val(Trim(Mid(TextLine, 158, 12)))
        ld_Ams06 = 0
        ld_AMS12 = 0

    lr_tbl.AddNew
        lr_tbl!DepNo = ls_DepNo
        lr_tbl!BrCode = ls_BrCode
        lr_tbl!ArtNo = ls_ArtNo
        lr_tbl!GLPeriod = ls_HldGLPd
        For i = 1 To 12
            Lr_tbl(ls_UpdStr(i)) = ld_ArtQty(i)
      Next
    lr_tbl.Update
Loop
```

Defaulted Data file

CKS1sAcY

Started position & Field lengths

GLPG (product Group)	-	started: 1	length: 4
GLPeriod (Record Period)	-	started: 5	length: 6
DepNo (Department No.)	-	started: 11	length: 3
BrCode (Branch Code)	-	started: 14	length: 2
ArtNo (Article No.)	-	started: 16	length: 10
ArtQty (Monthly sales figure)	-	started: 26	length: 12
ArtQty(2)	-	started: 38	length: 12
ArtQty(3)	-	started: 50	length: 12
ArtQty(4)	-	started: 62	length: 12
ArtQty(5)	-	started: 74	length: 12
ArtQty(6)	-	started: 86	length: 12
ArtQty(7)	-	started: 98	length: 12
ArtQty(8)	-	started: 110	length: 12
ArtQty(9)	-	started: 122	length: 12
ArtQty(10)	-	started: 134	length: 12
ArtQty(11)	-	started: 146	length: 12
ArtQty(12)	-	started: 158	length: 12

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APPENDIX C

DATABASE TABLES FOR SRP SYSTEM

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Database Table for SRP System

Table C.1. Product Group Master.

DepNo	GLPG	GLPGName
085	850	NA-X-RAY & PROF.
085	851	AGFA GEVAERT
085	856	EQUIPMENT
085	858	USED EQUIPMENT

Table C.2. Product Class Master.

GLCC	GLCCName	GLPG
1001	NA-XRAY & PROF	850
1003	DIFF IN EXCHANGE	850
1004	DISCREPANCY IN STK	850
1005	BAD DEBTS PROVISION	850
1006	MOTION PICTURE	851
1007	MOTION PICTURE TENDER	851
1008	X-RAY INDUSTRIAL	851
1009	X-RAY MEDICAL (COMM)	851
1010	X-RAY MEDICAL-D/PAID	851
1011	X-RAY MEDICAL-D/FREE	851
1012	TAPES	851
1013	MICROFILM	851

Table C.3. Actual Monthly Sales.

GLPeriod	DepNo	BrCode	ArtNo	ARTQTY01
199910	085	10	000004	0
199910	085	10	000061	30
199910	085	10	000065	0
199910	085	10	000066	32
199910	085	10	000067	80
199910	085	10	000068	66
199910	085	10	000069	15
199910	085	10	000070	0
199910	085	10	000100	0
199910	085	10	000102	0
199910	085	10	000104	0
199910	085	10	000105	0
199910	085	10	000108	0
199910	085	10	000110	0
199910	085	10	000111	0
199910	085	10	000115	0
199910	085	10	000116	0

Table C.4. Opening Stock.

RoPlUP	DepNo	BrCode	ArtNo	ARTQTYP
199909	085	10	000004	0
199909	085	10	000061	30
199909	085	10	000065	0
199909	085	10	000066	82
199909	085	10	000067	90
199909	085	10	000068	86
199909	085	10	000069	15
199909	085	10	000070	0
199909	085	10	000100	90
199909	085	10	000102	0
199909	085	10	000104	90
199909	085	10	000105	0
199909	085	10	000108	60
199909	085	10	000110	54
199909	085	10	000111	0
199909	085	10	000115	45
199909	085	10	000116	0
199909	085	10	000118	43

Table C.5. Outstanding Purchase Order.

DEPNO	ARTNO	BRCODE	SPETA	SPORDNO	SPORDQTY	PODate
085	000061	10	19991130	PS7271	100	19990905
085	000066	10	19991010	PJ7269	100	19990902
085	000066	10	19991130	PS7271	100	19990905
085	000067	10	19991130	PS7271	100	19990905
085	000245	10	19991130	PS7271	100	19990905
085	000296	10	19990819	PJ7260	500	19990716
085	000296	10	19991130	PS7273	1000	19990905
085	000383	10	19991130	PS7273	30	19990905
085	000650	10	19991009	PS7276	60	19990909
085	000665	10	19991010	PJ7269	150	19990902
085	000665	10	19991130	PS7271	100	19990905
085	000741	10	19991130	PS7273	120	19990905
085	000798	10	19991009	PS7276	180	19990909
085	000861	10	19990831	PJ7268	50	19990803
085	000861	10	19991130	PS7273	100	19990905
085	000865	10	19991130	PS7273	50	19990905

Table C.6. Article Master.

DepNo	ArtNo	ArtName	PartNo	ArtUnit
085	000004	GEVAR ST8 35MMX312M	HR752	ROLL
085	000061	STRUC D4 4X10" 100'S FW	3J35C	BOX
085	000065	STRUC D7 35X43CMX100'S	27LMA	BOX
085	000066	D7 4X10"X100S FW	28VKM	BOX
085	000067	D7 4X15"X100S FW	28VOU	BOX
085	000068	G334 FIXER 2X25LITS	2C41A	SET
085	000069	G350 FIXER 25LITS	2CWV4	BOT
085	000070	CURIX SCREEN CLEANER	HZEW8	BOT

ArtPCIs	ArtSubPC	ArtType	SprCode	VolCtn	ArtSprPc	ArtPcTyp
1006			100023	0	0	
1006			100023	0	28	
1006			100023	0	419.4	
1006			100023	0	55.67	
1006			100023	0	84.38	
1006			100023	0	25.1	
1006			100023	0	10.05	
1006			100023	0	10.31	

ArtAPPfx	ArtApNum	ArtAPSf	ArtWt	RMFs	ModelN	ArtDepre
			0	0		S
			0	0		S
			0	0		C
			0	0		C
			0	0		C
			0	0		C
			0	0		C
			0	0		C

Table C.7. Article Master 2.

DepNo	GLPG	GLCC	SubPC	ArtNo	PartNo	PrnRop
085	851	1006		001085	PJS-597241	Y
085	851	1007		000713		Y
085	851	1007		000714		Y
085	851	1007		000720		Y
085	851	1007		000722		Y
085	851	1007		000780		Y
085	851	1007		000781		Y
085	851	1007		000898		Y
085	851	1007		000936		Y
085	851	1007		000937		Y

Table C.7. Article Master 2. (Continued)

PrnFcAms	CritID	ValueI	CurrCod	Categories	FMS	CrtInd	StkOrTo
Y	01	01				T	1
Y	01	01				T	1
Y	01	01				T	1
Y	01	01				T	1
Y	01	01				T	1
Y	01	01				T	1
Y	01	01				T	1
Y	01	01				T	1
Y	01	01				T	1
Y	01	01				T	1

Table C.8. Article Unit/Measure.

DepNo	ArtNo	CFFACT

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APPENDIX D

INFORMATION REQUIRED FOR SRP SYSTEM

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Information Required for SRP System

Table D.1. Table – ArtSupDf <optional>.

An article has a default supplier in the table. If an article is not found in the table means that no supplier will appear during the report printing. The data entry can be done in 'Supplier default to Article' of File Maintenance Menu Module, and "Select Item" of Reorder Proposal Updating Module.

DepNo	GLPG	GLCC	SubPC	ArtNo	ArtName	SurCode
085	851	1009		10089	G350	100139
085	851	1009		10090	G351	100140
085	851	1009		10092	G352	100141

Table D.2. Table – CoDet <required>.

Consists of company's information.

CoTitle	CoName	RegNo	Address1	Address 2
AE	AE (Thailand) Co.,Ltd.	(136598-X)		

Address 3	PostCode

Table D.3. Table – Criteria <required>.

Intersection table which build up the relationship between categories and values for each department

DepNo	GLPG	GLCC	SubPC	CritID	ValueID
085	NULL	NULL	NULL	01	01
085	NULL	NULL	NULL	01	02

Indic	StkorTop	FileType
T	1	SU
T	1	SU

Table D.4. Table – CrtMas <required>.

Categories master file.

DepNo	CritID	CrtDesc1	CrtDesc2
085	01	Slow Moving	1 or nil sales(in units) during past 12
085	02	Medium Moving	2 to 5 sales during past 12 mths
085	03	Fast Moving	6 or more sales during past 12 mths
085	04	Spare parts for newly	12 months from purchase date of 1st unit

Indic	Oper1	CrtVal1	Oper2	CrtVal2	Mths
R	<=	1			1
I	>	1	<	6	1
R	>=	6			1
N	<=	12			1

Table D.5. Table – CrtVal <required>.

Criteria master file.

DepNo	ValueID	ValDesc	Indic	Oper1
085	01	High Value	R	>
085	02	Medium Value	I	>=
085	03	Low Value	R	<

Value1	Oper2	Value2
500		
100	<=	500
100		

Table D.6. Table – DepMod <required>.

Build up the relationship between Department and Module in the SRP application.

(a) Module 1 = Stock Reorder Proposal For Consumable Goods (Without Sorting By Categories).

(b) Module 2 = Stock Reorder Proposal For Replacement And After Market Parts (Sorting By Categories).

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Table D.6. Table – DepMod <Continue>.

DepNo	ModuleID
085	01
085	02

Table D.7. Table – DepMas <required>.

Department master file, Department password is required to work with certain modules/functions in SRP application.

DepNo	DepName	DepPW
085	Diagnostic	085

Table D.8. Table – DivMas <required>.

Division master file.

DivNo	Desc
05	Technical Marketing

Table D.9. Table – FieldLen <required>.

This is a main table, which consists of the field length for the primary key fields in the SRP's entity set. The lengths of the key fields are required for the fields capturing to perform data processing and calculating.

SeqNo	FldDesc	Length
1	GLPG	3

Table D.10. Table – ImpFl <required>.

To store the file path of the downloaded data files from the ABC systems.

FileNo	FileName	FilePath
1	Opening Stock File (ckOpnStk)	C:\Srp\ImpFl\ckOpnStk
2	Monthly Actual Sales File –	C:\Srp\ImpFl\ckSlsAcM
3	Outstanding Purchase Orders File	C:\Srp\ImpFl\ckOutPOM
4	Article Conversion Master File	C:\Srp\ImpFl\ckMasCn
5	Product Group Master File	C:\Srp\ImpFl\ckMasPG
6	Product Class Master File	C:\Srp\ImpFl\ckMasCC
7	Article Master File (ckArtMas)	C:\Srp\ImpFl\ckArtMas
8	Purge Previous Month Records	
9	All Files Above	C:\Srp\ImpFl\
10	Sales Forecast File (Srslsfct)	C:\Srp\ImpFl\
11	Actual Sales File (Srslsact)	C:\Srp\ImpFl\ckSlsAcY

Table D.11. Table – LeadTime <required>.

Store the lead-time by month basis for reordering. The lead-time of article for reordering can be represented by hierarchically in the table.

DepNo	RegNo	GLPG	GLCC	SubPC	ArtNo	LeadTime
085	MAL	850	NULL	NULL	NULL	1
085	MAL	851	NULL	NULL	NULL	1
085	MAL	851	NULL	NULL	NULL	1

Table D.12. Table – ModMas <required>.

Module master file.

ModuleID	ModDesc
01	SRP for Consumable Goods (Without Sorting By Categories)
02	SRP for Replacement and After Market Parts (Sorting By Categories)

Table D.13. Table – RptMas <required>.

(a) Report master file, consists of those report that are used in SRP application. The report name will appear as the report title as what it was stored in the table.

(b) The filed 'RptForm' is used to decide whether what report to be appeared in the selection list of reporting main menu.

RptID	RptName	RptForm
1	Stock Reorder Proposal Details	Y
2	Stock Reorder Proposal Summary	Y
3	Purchase Order	Y
4	Sales Forecast For Year	N
5	Reorder Proposal Quantity Adjustment Log	N
6	Outstanding Order Within Reorder Cycle	Y
7	Outstanding Order Beside Reorder Cycle	Y
8	Categories Report By Department	Y

Table D.14. Table – SrMasRg <required>.

(a) Region master files and consolidates those branches' figures to specific region level.

(b) Maximum of six branches can be keyed in for 'Randum' branch type, and not more than two branches are required for 'Interval' type.

RegNo	RegName	BrType	BrCode1	BrCode2	BrCode3	BrCode4
BKK	BANGKOK	I	10	62		
MAL	MALAYSIA	R	25	40	42	

BrCode5	BrCode6

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Table D.15. Table – SrOrgFct <optional>.

Original Forecast by article level. Remain unchanged after created.

DepNo	RegNo	GLPG	GLCC	ArtNo	Year
085	MAL	851	1006	000004	1999
085	MAL	851	1006	000004	2000
085	MAL	851	1008	000061	1999
085	MAL	851	1008	000061	2000

OrgFct01	OrgFct02	OrgFct03	OrgFct04	OrgFct05	OrgFct06	OrgFct07
30	40	10	20	20	20	20
30	40	10	20	20	20	20

OrgFct08	OrgFct09	OrgFct10	OrgFct11	OrgFct12
10	50	25	35	10
10	50	25	35	10

Table D.16. Table – SrSlsFct <optional>.

The latest forecast figure by article level. The figures in the columns are subjects to change.

DepNo	RegNo	GLPG	GLCC	ArtNo	Year	FctQty01	FctQty02
085	MAL	851	1006	000004	1999		
085	MAL	851	1006	000004	2000	30	40

FctQty03	FctQty04	FctQty05	FctQty06	FctQty07	FctQty08	FctQty09
10	20	20	10	50	25	35

FctQty10	FctQty11	FctQty12	FctQty13
	10	20	
10			

Table D.17. Table – SrSprMas <required>.

Supplier master file.

SprCode	SprName	RepTy	CurrCod	Freight	FwdMthInd	PMSInd
100075	Noritsu	M	DKK	CIF		
100139	Fenner	P	USA		N	
100144	Hyster Limited	M	NOK	CIF		
100155	Timken	M	USD	CIF		

Table D.18. Table – Systable <required>.

It is used to lock the main table from any unnecessary corruption during file importing. 1 = locked, 0 = unlocked.

FunID	FunName	Status
01	funArtMas	0
02	TmpActM	0

Table D.19. Table – UserDep <required>.

Intersection table between User and Department. It is possible to have many users in one department, and one user to access many departments.

UserID	DepNo	BrCode	DivNo
Admin	*	*	*
PORN	085	10	05

Table D.20. Table – UserMs <required>.

User master file. If 'Manager' column is set to 'Y', means that user have the authority to access a few functions like 'Categories Amendment', 'Values Amendment', 'Model Master' and 'Categories & Criteria Amendment'.

UserID	UserName	PassWord	Level	OnDate	OnJob	Manager
ADMIN	STEVEN	ADMIN	10	1/12/99	Y	Y
PORN	PORNCHAI	PORN	10	1/12/99	Y	Y

APPENDIX E

PROCESSING TABLES FOR SRP SYSTEM

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Processing Tables for SRP System

(1) Table – CrtRopM1

Store information of reordering for the reordering option with categories.

(2) Table – LstFctMd

Latest forecast figure modification log file.

(3) Table – PrtNoAmd

Store those old Part No of the articles have been replaced and the newly Part No as well.

(4) Table – RopAdjmd

Reorder Proposal Adjustment log file.

(5) Table – RopQtyHis

The backup table for 'SrRopQty' which store the previous two months reordering information. The table format exactly same as 'SrRopQty'.

(6) Table – RopQtyHisCrt

The backup table for 'CrtRopM1'which store the previous two months reordering information. The table format exactly same as 'RopQtyHisCrt'.

(7) Table – SrRopQty

Store information of reordering for the reordering option without category.

(8) Table – SrSlsAct

Store 12 months AMS, 6 months AMS and Opening Stock for every month.

(9) Table – ActMTx

Store the sales history in transaction basis.

(10) Table – ArtModel

The Intersection table between article and machine model

(11) Table – CurrMas

The currency master file.

(12) Table – DocType

To store the latest system generated number. E.g. Purchase Order number.

(13) Table – POHD

The purchase Order Header file.

(14) TmpActM

The processing table for importing actual monthly sales.

(15) TmpActM2

The processing table for importing Article master file record.

(16) TmpUpLdA

The processing table for importing Article master file record.

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APPENDIX F

SCREEN DESIGN

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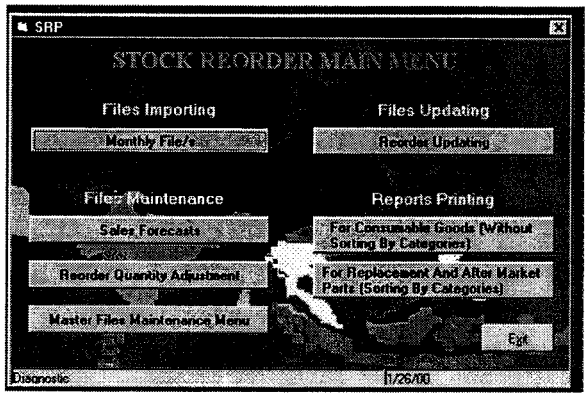

Figure F.1. Main Menu.

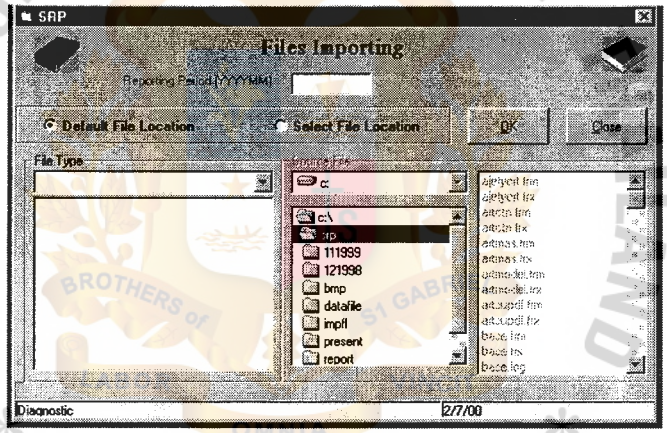

Figure F.2. File Importing.

This Screen will be used to download data files from the main system and the information is stored in Stock Reorder Proposal database by the desired format.

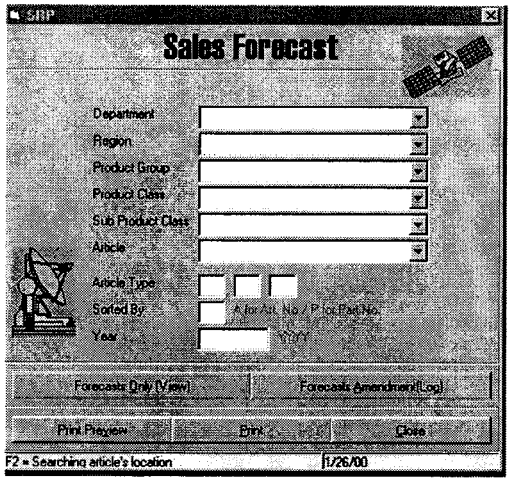

Figure F.3. Sales Forecast.

It will be used by Product Manger or authorized person to key in the amount of sales forecast by month.

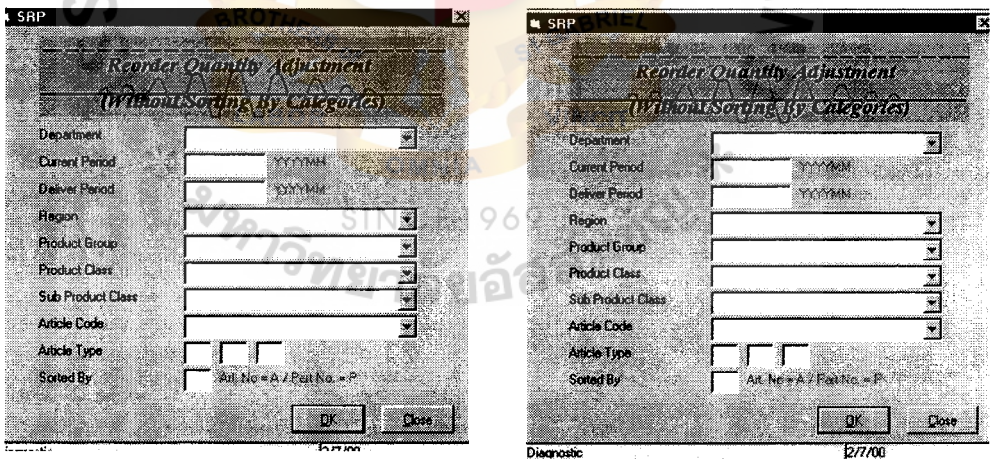

Figure F.4. Reorder Quantity Adjustment.

There are 2 options, the first option is the reorder quantity adjustment and without sorting by categories that will be use where the number of stock units are limited and ordering base on forecast sales is recommended. The second option is the reorder quantity adjustment and sorting by categories that will be use for the large number of stock units.

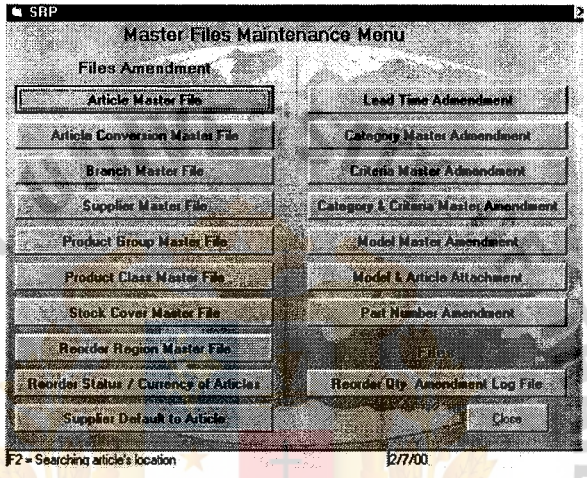

Figure F.5. Master Files Maintenance Menu.

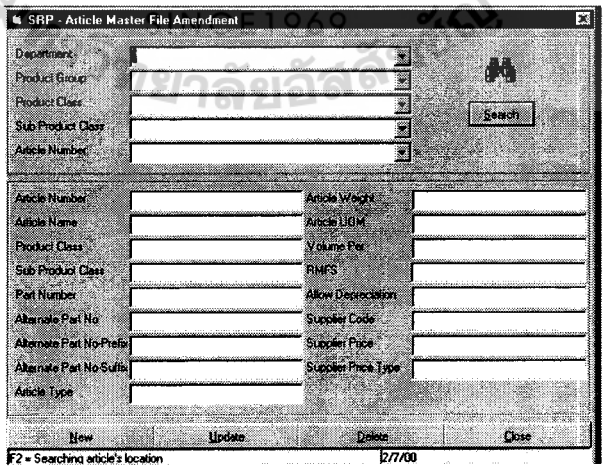

Figure F.6. Article Master File Amendment.

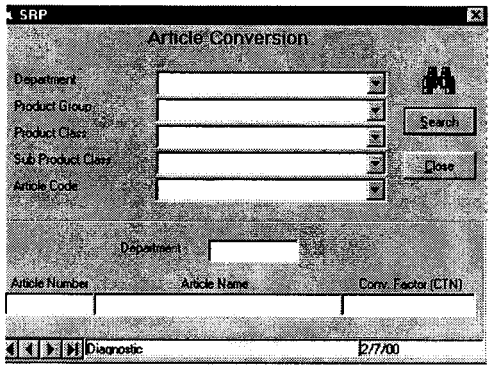

Figure F.7. Article Conversion.

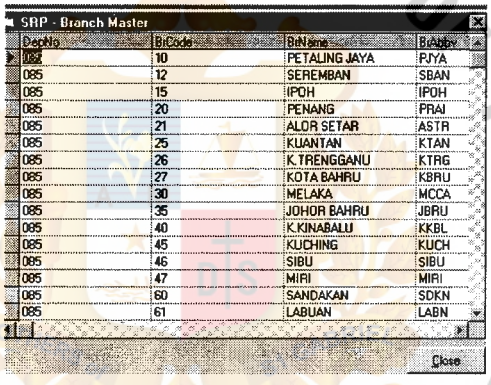

Figure F.8. Branch Master.

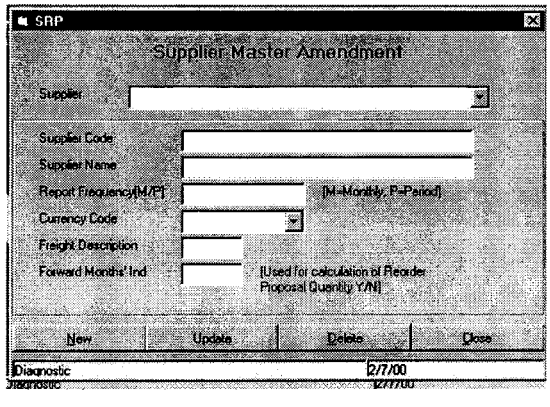

Figure F.9. Supplier Master Amendment.

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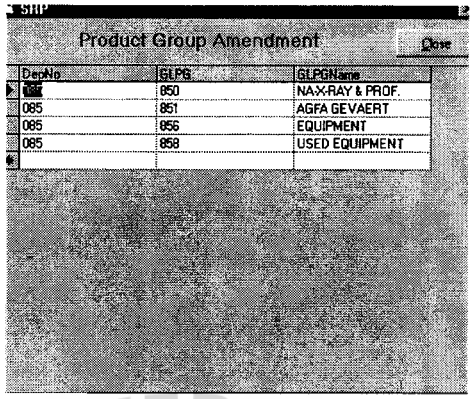

Figure F.10. Product Group Amendment.

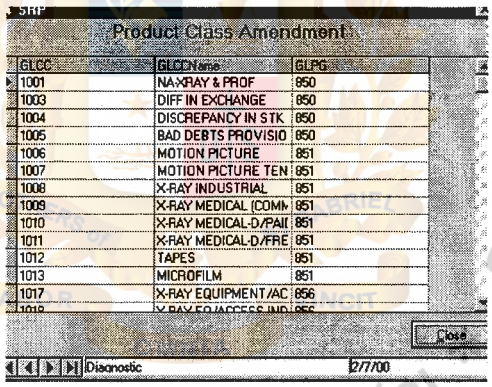

Figure F.11. Product Class Amendment.

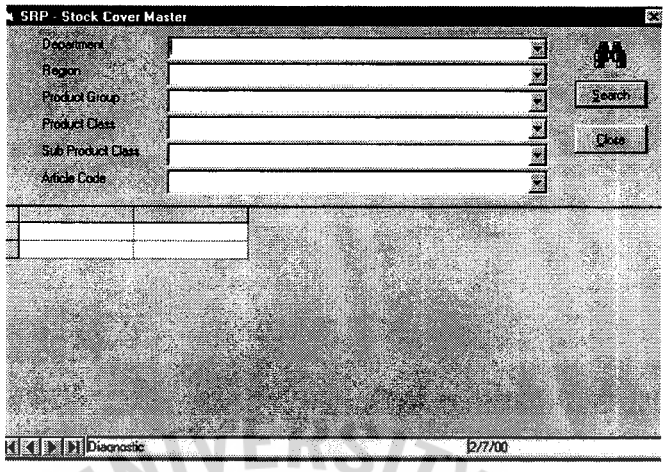

Figure F.12. Stock Cover Master.

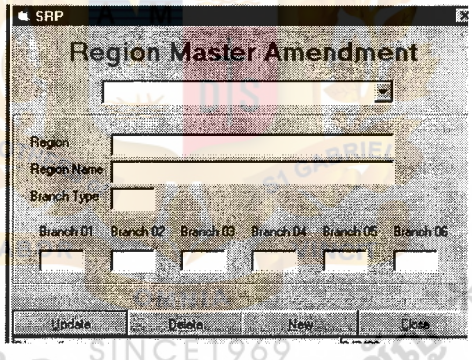

Figure F.13. Region Master Amendment.

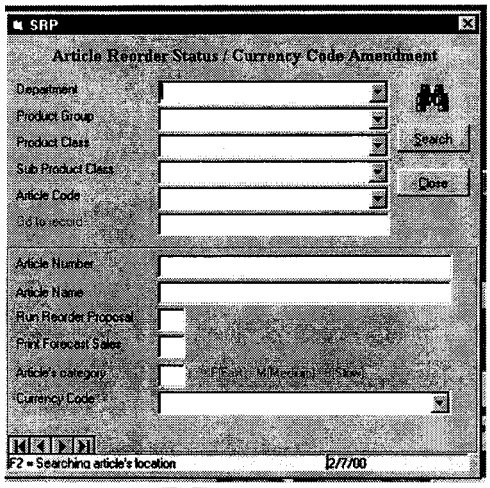

Figure F.14. Article Reorder Status / Currency Code Amendment.

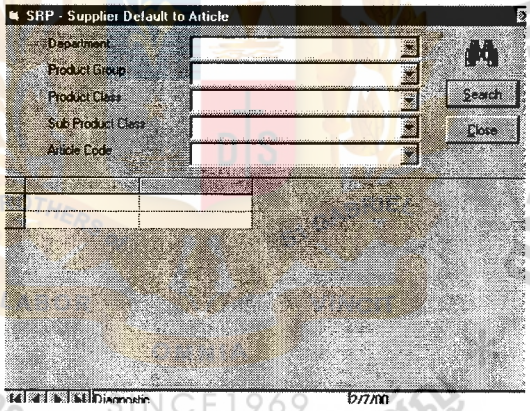

Figure F.15. Supplier Default to Article.

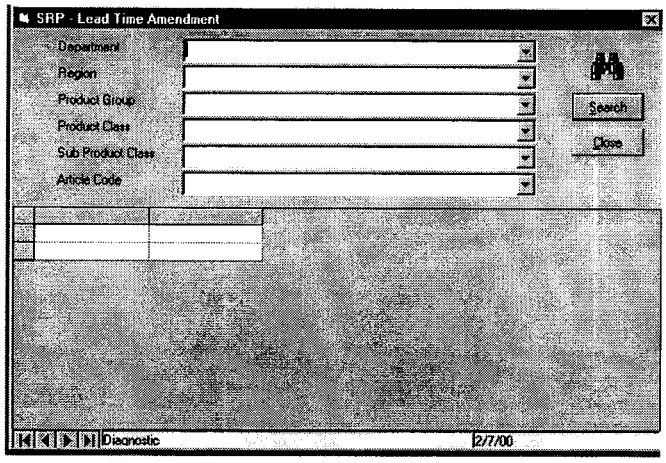

Figure F.16. Lead Time Amendment.

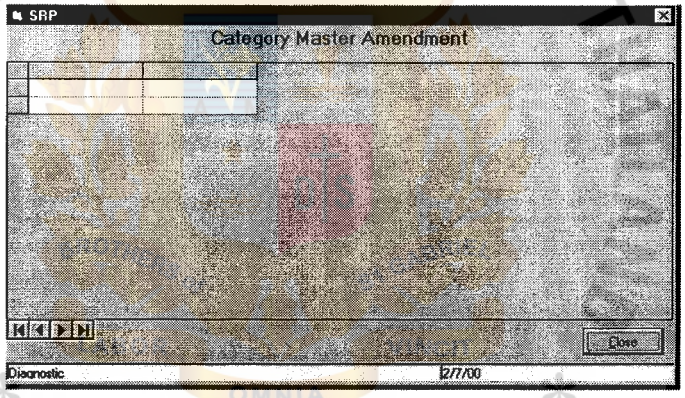

Figure F.17. Category Master Amendment.

ASSUMPTION UNIVERSITY OF THAILAND
SINCE1969
มหาวิทยาลัยอัสสัมชัญ

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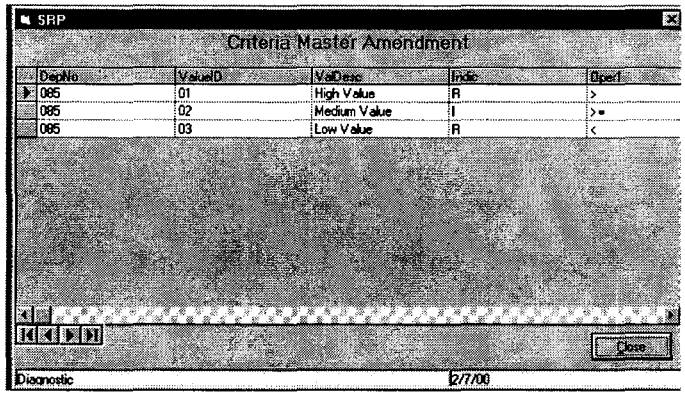

Figure F.18. Criteria Master Amendment.

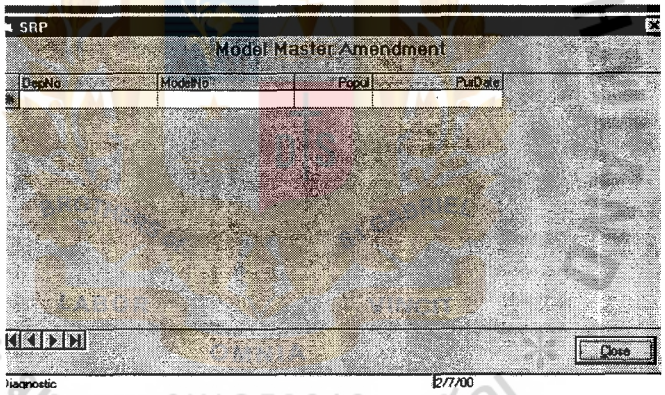

Figure F.19. Model Master Amendment.

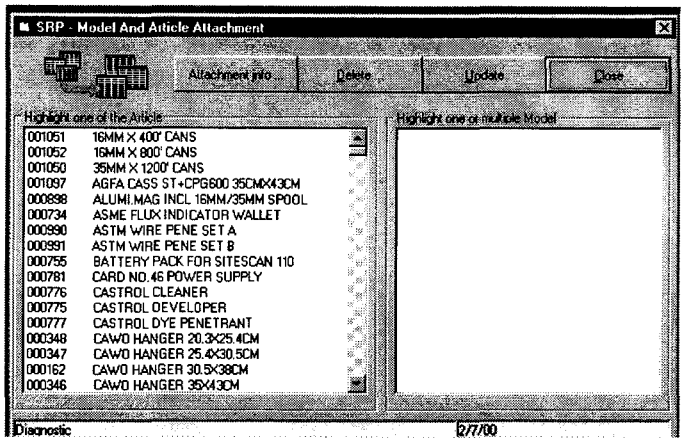

Figure F.20. Model and Article Attachment.

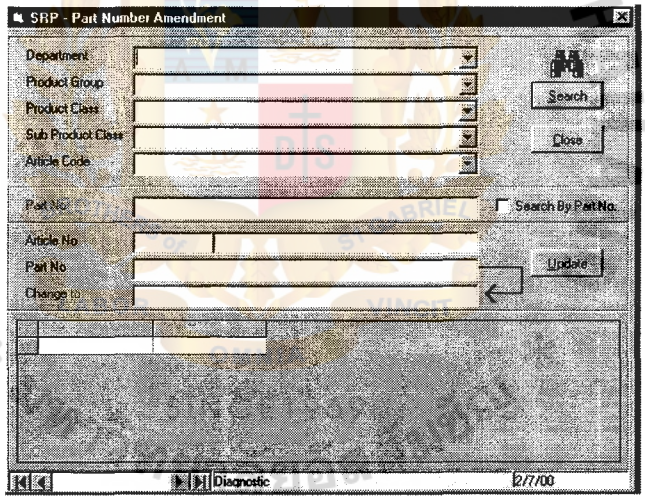

Figure F.21. Part Number Amendment.

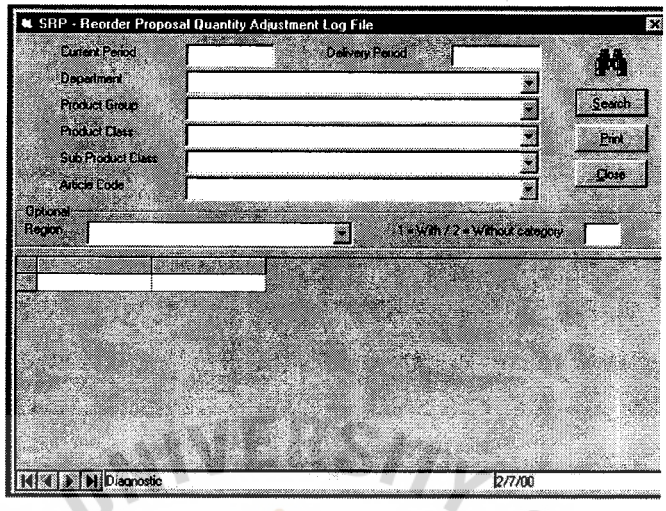

Figure F.22. Reorder Proposal Adjustment Log File.

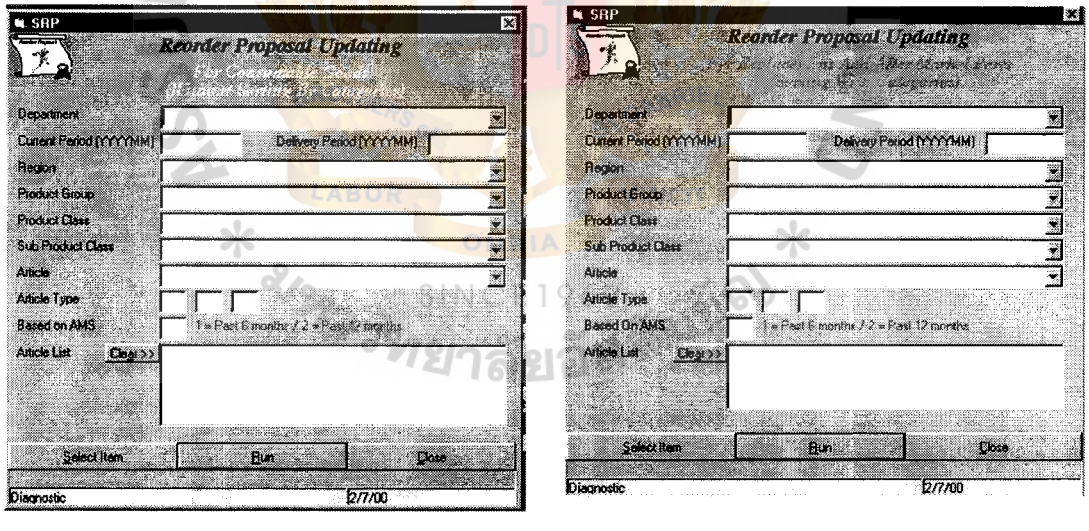

Figure F.23. Reorder Proposal Updating.

There are 2 options, the first option is the reorder proposal updating and without sorting by categories that will be use where the number of stock units are limited and

ordering base on forecast sales is recommended. The second option is the reorder proposal updating and sorting by categories that will be use for the large number of stock units.

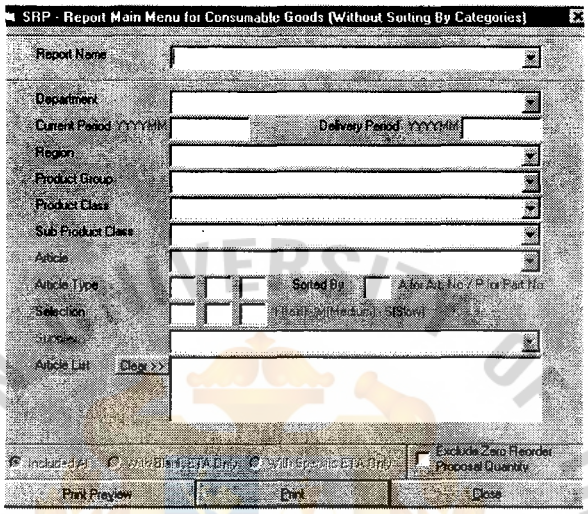

Figure F.24. Report Main Menu.

There are 6 reports as following, Stock Reorder Proposal by Details, Stock Reorder Proposal by Summary, Purchase Order, Outstanding Order within Reorder Cycle Period, Outstanding Order beside Cycle Period and Categories Report by Department.

APPENDIX G

OUTPUT REPORT

ASSUMPTION UNIVERSITY OF THAILAND
BROTHERS OF ST GABRIEL
LABOR OMNIA VINCIT
SINCE1969
มหาวิทยาลัยอัสสัมชัญ

AE (Thailand) Co.,Ltd.

Reorder Proposal Details
For November 1999 Arrival In January 2000
(BANGKOK)

Page 1
Date : 21/1/00

Department : 085 Diagnostic
Supplier :
Prod. Group : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Class :

Reorder Based On Forward Month's Forecast: Y

Based On AMS Past 6 Month

SKU'S	199811	199812	199901	199902	199903	199904	199905	199906	199907	199908	199909	199910	199911	199912	200001	200002	200003	200004	200005	200006	Proposed Reorder Qty	AMS 6 Mths Past	AMS 12 Mths Past	Opening Stk Bal 199911	Target Stock Cover
000065	27LMA				STRUC D7 35X43CMX100'S FW																	2	1	0	1.50
Actual Sales	0	0	3	0	1	0	10	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00													
On Order																					5				BSL
Calculated Closing Stock													0	0	3	1	0	0	0	0					-
Actual/Cal Mthly Stk Cov													0.00	0.00	1.50	0.50	0.00	0.00	0.00	0.00					
000066	28VKM				D7 4X10"X100S FW																	134	106	203	1.50
Actual Sales	32	66	40	50	115	181	153	121	143	147	72	160													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00													
On Order													100								300				BSL
Calculated Closing Stock													169	35	201	67	0	0	0	0					-
Actual/Cal Mthly Stk Cov													1.26	0.26	1.50	0.50	0.00	0.00	0.00	0.00					
000067	28VOU				D7 4X15"X100S FW																	117	124	418	1.50
Actual Sales	312	125	106	35	118	95	135	104	122	127	69	141													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00													
On Order													100								9				BSL
Calculated Closing Stock													401	284	176	59	0	0	0	0					-
Actual/Cal Mthly Stk Cov													2.43	2.43	1.50	0.50	0.00	0.00	0.00	0.00					
000210	27J78				D7 70MMX90M PB																	62	56	156	1.50
Actual Sales	32	50	56	18	104	46	28	74	62	124	26	56													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00													
On Order																					123				BSL
Calculated Closing Stock													94	32	93	31	0	0	0	0					-
Actual/Cal Mthly Stk Cov													1.52	0.52	1.50	0.50	0.00	0.00	0.00	0.00					
000293	3J21Y				STRUCT D4 BLR 70MMX305M																	2	1	0	1.50
Actual Sales	0	0	0	0	0	0	0	0	0	3	0	6													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00													
On Order																					5				BSL
Calculated Closing Stock													0	0	3	1	0	0	0	0					-
Actual/Cal Mthly Stk Cov													0.00	0.00	1.50	0.50	0.00	0.00	0.00	0.00					

Figure G.1. Stock Reorder Proposal Details Report: Page 1.

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AE (Thailand) Co.,Ltd.

Reorder Proposal Details
For November 1999 Arrival In January 2000
(BANGKOK)

Page : 2
Date : 21/1/00

Department : 085 Diagnostic
Supplier :
Prod. Group : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Class :

Reorder Based On Forward Month's Forecast: Y

Based On AMS Past 6 Month

SKU'S	199811	199812	199901	199902	199903	199904	199905	199906	199907	199908	199909	199910	199911	199912	200001	200002	200003	200004	200005	200006	Proposed Reorder Qty	AMS 6 Mths Past	AMS 12 Mths Past	Opening Stk Bal 199911	Target Stock Cover
000553	28U3L				STRUC D7 18X43CM 100'S FW																	1	0	2	1.50
Actual Sales	0	0	0	0	0	0	0	0	0	0	0	3													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00													
On Order																					3				BSL
Calculated Closing Stock													1	0	2	1	0	0	0	0					-
Actual/Cal Mthly Stk Cov													1.00	0.00	2.00	1.00	0.00	0.00	0.00	0.00					
000650	38WRN				G335 2X20 LITS FIXER																	15	9	22	1.50
Actual Sales	9	3	6	0	2	0	0	9	0	4	3	72													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00													
On Order																					38				BSL
Calculated Closing Stock													7	0	23	8	0	0	0	0					-
Actual/Cal Mthly Stk Cov													0.47	0.00	1.53	0.53	0.00	0.00	0.00	0.00					
000665	293Q2				STRUCTURIX D5 70MMX90M PB																	68	59	46	1.50
Actual Sales	70	40	74	33	58	28	56	70	86	72	64	55													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00													
On Order													100								160				BSL
Calculated Closing Stock													78	10	102	34	0	0	0	0					-
Actual/Cal Mthly Stk Cov													1.15	0.15	1.50	0.50	0.00	0.00	0.00	0.00					
000987	28V5T				STRUCT D7 25.4X30.5CM 100'S FW																	1	2	1	1.50
Actual Sales	5	0	7	0	3	0	0	4	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00													
On Order																					3				BSL
Calculated Closing Stock													0	0	2	1	0	0	0	0					-
Actual/Cal Mthly Stk Cov													0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.00					

Figure G.2. Stock Reorder Proposal Details Report: Page 2.

AE (Thailand) Co.,Ltd.

Reorder Proposal Summary
For November 1999 Arrival In January 2000
(BANGKOK)

Page: 1
Date: 21/1/00

Supplier :
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

Reorder Based On Forward Month's Forecast: Y

Based On AMS Past 6 Months

	Article Description	Part No	Art. No	Units Ctn	Stock Bal (a)	<Order Coming In> Ord. No	PO Date	ETA	Qty (b)	Stock (a) + (b)	AMS	Cur to Div Sales Avg	Stock Cover Average	Prop. Reord. Qty	Prop. Reord. Qty(Ctn)	Manual Adj(Qty) +/-	Total Reord. Qty	Cal Month Turnover
1	STRUC D7 35X43CMX100'S FW	27LMA	000065	1	0					0	2	2	1.50	5	5		5	1.50
2	D7 4X10"X100S FW	28VKM	000066	1	203	PS7271	19990905	19991130	100	303	134	134	1.50	300	300		300	1.50
3	D7 4X15"X100S FW	28VOU	000067	1	418	PS7271	19990905	19991130	100	518	117	117	1.50	9	9		9	1.50
4	D7 70MMX90M PB	27J78	000210	1	156					156	62	62	1.50	123	123		123	1.50
5	STRUCT D4 BLR 70MMX305M	3J21Y	000293	1	0					0	2	2	1.50	5	5		5	1.50
6	STRUC D7 18X43CM 100'S FW	28U3L	000553	1	2					2	1	1	1.50	3	3		3	2.00
7	G335 2X20 LITS FIXER	38WRN	000650	1	22					22	15	15	1.50	38	38		38	1.53
8	STRUCTURIX D5 70MMX90M PB	293Q2	000665	1	46	PS7271	19990905	19991130	100	146	68	68	1.50	160	160		160	1.50
9	STRUCT D7 25.4X30.5CM 100'S FW	28V5T	000987	1	1					1	1	1	1.50	3	3		3	2.00

Grand Total 646

Figure G.3. Stock Reorder Proposal Summary Report.

AE (Thailand) Co.,Ltd.

Purchase Order For November 1999
(BANGKOK)

Page: 1
Date: 21/1/00

Supplier : 100139 Fenner Limited
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

	Article Description	Part No	Art. No	Units Ctn	C&F (MYR)/Unit	Prop. Reord. Qty(Ctn)	Prop. Reord. Qty	C&F (MYR)
1	STRUC D7 35X43CMX100'S FW	27LMA	000065	1	419.400	5	5	2097.00
2	D7 4X10"X100S FW	28VKM	000066	1	55.670	300	300	16701.00
3	D7 4X15"X100S FW	28VOU	000067	1	84.380	9	9	759.42
4	D7 70MMX90M PB	27J78	000210	1	221.400	123	123	27232.20
5	STRUCT D4 BLR 70MMX305M	3J21Y	000293	1	540.000	5	5	2700.00
6	STRUC D7 18X43CM 100'S FW	28U3L	000553	1	216.000	3	3	648.00
7	G335 2X20 LITS FIXER	38WRN	000650	1	38.120	38	38	1448.56
8	STRUCTURIX D5 70MMX90M PB	293Q2	000665	1	60.780	160	160	9724.80
9	STRUCT D7 25.4X30.5CM 100'S FW	28V5T	000987	1	248.000	3	3	744.00
						Total :	646	62054.98

Figure G.4. Purchase Order Report.

AE (Thailand) Co.,Ltd.

Outstanding Order From November 1999 To January 2000
(BANGKOK)

Page: 1
Date: 21/1/00

Supplier :
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

	Article Description	Part No	Art. No	PO Date	ETA	<Order Coming In> Ord. No	Qty	Total
1	STRUC D4 4X10" 100'S FW	3J35C	000061	19990905	19991130	PS7271	100.00	100
2	D7 4X10"X100S FW	28VKM	000066	19990905	19991130		100.00	
3	D7 4X15"X100S FW	28VOU	000067	19990905	19991130		100.00	
4	STRUC D4 4X15" 100'S FW	3J3ET	000245	19990905	19991130		100.00	
5	STRUCTURIX D5 70MMX90M PB	293Q2	000665	19990905	19991130		100.00	
							Grand Total	500.00

Figure G.5. Outstanding Order within Reorder Cycle Period.

St. Gabriel's Library

AE (Thailand) Co.,Ltd.

Outstanding Order Outside The Reorder Cycle Months
From November 1999 To January 2000
(BANGKOK)

Page: 1
Date: 21/1/00

Supplier :
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

	Article Description	Part No	Art. No	<Order Coming In>				
				PO Date	ETA	Ord. No	Qty	Total
1	D7 4X10"X100S FW	28VKM	000066	19990902	19991010	PJ7269	100.00	100
2	G335 2X20 LITS FIXER	38WRN	000650	19990909	19991009	PS7276	60.00	60
3	STRUCTURIX D5 70MMX90M PB	293Q2	000665	19990902	19991010	PJ7269	150.00	150
4	STRUCT F6 BLR 70MMX250M	3UUSB	000798	19990909	19991009	PS7276	180.00	180
5	STRUCT D7 25.4X30.5CM 100'S FW	28V5T	000987	19990902	19991010	PJ7269	10.00	10
						Grand Total		500.00

Figure G.6. Outstanding Order beside Reorder Cycle Period.

AE (Thailand) Co.,Ltd.

Reorder Proposal Details
For November 1999 Arrival In January 2000
(BANGKOK)

Page : 1
Date : 21/1/00

Department : 085 Diagnostic
Supplier :
Prod. Group : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Class :

Category: 01 Slow Moving

Based On AMS Past 6 Month
Reorder Based On Forward Month's Forecast: Y

SKU'S	199811	199812	199901	199902	199903	199904	199905	199906	199907	199908	199909	199910	199911	199912	200001	200002	200003	200004	200005	200006	Proposed Reorder Qty	AMS 6 Mths Past	AMS 12 Mths Past	Opening Stk Bal 199911	Target Stock Cover
000219	27LJ1				STRUC D7 30X40CMX100S FW								Medium Value									0	0	0	.00
Actual Sales	0	0	4	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
000294	2PLYV				DSP 70MMX305M								High Value									0	0	0	.00
Actual Sales	0	0	2	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
000450	3JZ4W				STRUC D4 35X43CMX100S DW								High Value									0	0	0	.00
Actual Sales	0	0	0	0	0	1	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
000517	280FJ				STRUC D7 35X43CMX100S DW								High Value									0	0	0	.00
Actual Sales	0	0	0	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
000655	3J1CG				STRUCTURIX D4 70MMX90M PB								Medium Value									0	0	0	.00
Actual Sales	0	0	0	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					

Figure G.7. Stock Reorder Proposal Details Report: Page 1.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Reorder Proposal Details
For November 1999 Arrival In January 2000
(BANGKOK)

Page 2
Date : 21/1/00

Department : 085 Diagnostic
Supplier :
Prod. Group : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Class :

Category: 01 Slow Moving

Based On AMS Past 6 Month
Reorder Based On Forward Month's Forecast: Y

SKU'S	199811	199812	199901	199902	199903	199904	199905	199906	199907	199908	199909	199910	199911	199912	200001	200002	200003	200004	200005	200006	Proposed Reorder Qty	AMS 6 Mths Past	AMS 12 Mths Past	Opening Stk Bal 199911	Target Stock Cover
000715	3UEPB				STRUCT CERTIFIED DENSTEP								Medium Value									0	0	0	.00
Actual Sales	0	0	0	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
000800	3J1P6				STRUCT D4 11.4CMX43CM PB								Medium Value									0	0	0	.00
Actual Sales																									
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
000801	3JZZO				STRUCT D4 11.4CMX43CM DW								Medium Value									0	0	0	.00
Actual Sales																									
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
000802	2RNJQ				STRUCT D7 18CMX43CM DW								Medium Value									0	0	0	.00
Actual Sales																									
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
000915	3GTO5				STRUC D4 30X40CM 100'S FW								Medium Value									0	0	0	.00
Actual Sales	0	0	0	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					

Figure G.8. Stock Reorder Proposal Details Report: Page 2.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Reorder Proposal Details
For November 1999 Arrival In January 2000
(BANGKOK)

Page 3
Date : 21/1/00

Department : 085 Diagnostic
Supplier :
Prod. Group : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Class :

Category: 01 Slow Moving

Based On AMS Past 6 Month
Reorder Based On Forward Month's Forecast: Y

SKU'S	199811	199812	199901	199902	199903	199904	199905	199906	199907	199908	199909	199910	199911	199912	200001	200002	200003	200004	200005	200006	Proposed Reorder Qty	AMS 6 Mths Past	AMS 12 Mths Past	Opening Stk Bal 199911	Target Stock Cover
000990					ASTM WIRE PENE SET A								Low Value									0	0	0	.00
Actual Sales																									
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
000991					ASTM WIRE PENE SET B								Low Value									0	0	0	.00
Actual Sales																									
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
001048	28LUZ				STRUCT D7 ROLLP PB 100MMX90M								Medium Value									0	1	0	.00
Actual Sales	0	12	0	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
001104	293O2				STRUCT D5 PB RPAC DIS 70MMX90M								Low Value									0	0	0	.00
Actual Sales	0	0	0	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					

Figure G.9. Stock Reorder Proposal Details Report: Page 3.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Reorder Proposal Details
For November 1999 Arrival In January 2000
(BANGKOK)

Page 4
Date : 21/1/00

Department : 085 Diagnostic
Supplier :
Prod. Group : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Class : SPL

Category: 01 Slow Moving

Based On AMS Past 6 Month
Reorder Based On Forward Month's Forecast: Y

SKU'S	199811	199812	199901	199902	199903	199904	199905	199906	199907	199908	199909	199910	199911	199913	200001	200002	200003	200004	200005	200006	Proposed Reorder Qty	AMS 6 Mths Past	AMS 12 Mths Past	Opening Stk Bal 199911	Target Stock Cover
001041	27J7B-SPL				D7 70MMX90M PB								Low Value									0	0	0	.00
Actual Sales	5	0	0	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					
001045	28VOU-SPL				D7 4X15" 100'S FW								Low Value									0	0	0	.00
Actual Sales	0	0	0	0	0	0	0	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									1				
On Order																									BSL
Calculated Closing Stock													0	0	1	1	1	1	1	1					-
Actual/Cal Mthly Stk Cov													0.00	.00	.00	.00	.00	.00	.00	.00					

Figure G.10. Stock Reorder Proposal Details Report: Page 4.
(Sorted by Categories)

St. Gabriel's Library

AE (Thailand) Co.,Ltd.

Reorder Proposal Details
For November 1999 Arrival In January 2000
(BANGKOK)

Page 5
Date : 21/1/00

Department : 085 Diagnostic
Supplier :
Prod. Group : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Class :

Category: 02 Medium Moving

Based On AMS Past 6 Month
Reorder Based On Forward Month's Forecast: Y

SKU'S	199811	199812	199901	199902	199903	199904	199905	199906	199907	199908	199909	199910	199911	199912	200001	200002	200003	200004	200005	200006	Proposed Reorder Qty	AMS 6 Mths Past	AMS 12 Mths Past	Opening Stk Bal 199911	Target Stock Cover
000553	24U2L				STRUC D7 18X43CM 100'S FW								Medium Value									1	0	2	1.50
Actual Sales	0	0	0	0	0	0	0	0	0	0	0	2													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									2				
On Order																									BSL
Calculated Closing Stock													1	0	2	1	0	0	0	0					-
Actual/Cal Mthly Stk Cov													1.00	.00	2.00	1.00	.00	.00	.00	.00					
000987	28V5T				STRUCT D7 25.4X30.5CM 100'S FW								Medium Value									1	2	1	1.50
Actual Sales	5	0	7	0	3	0	0	4	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									2				
On Order																									BSL
Calculated Closing Stock													0	0	2	1	0	0	0	0					-
Actual/Cal Mthly Stk Cov													0.00	.00	2.00	1.00	.00	.00	.00	.00					

Figure G.11. Stock Reorder Proposal Details Report: Page 5.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Reorder Proposal Details
For November 1999 Arrival In January 2000
(BANGKOK)

Page 6
Date : 21/1/00

Department : 085 Diagnostic
Supplier :
Prod. Group : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Class :

Category: 03 Fast Moving

Based On AMS Past 6 Month
Reorder Based On Forward Month's Forecast: Y

SKU'S	199811	199812	199901	199902	199903	199904	199905	199906	199907	199908	199909	199910	199911	199912	200001	200002	200003	200004	200005	200006	Proposed Reorder Qty	AMS 6 Mths Past	AMS 12 Mths Past	Opening Stk Bal 199911	Target Stock Cover
000061	3J35C				STRUC D4 4X10" 100'S FW								Low Value									58	48	116	3.00
Actual Sales	5	50	35	55	30	60	115	36	40	38	37	82													
Original Forecast													10	20	30	40	10	20	20	10					RMFS
Latest Forecast													10	30	30	40	10	20	20	10					
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									132				
On Order													100												BSL
Calculated Closing Stock													158	100	174	116	58	0	0	0					
Actual/Cal Mthly Stk Cov													7.90	3.33	4.35	11.60	2.90	.00	.00	.00					
000065	27LMA				STRUC D7 35X43CMX100'S FW								Medium Value									2	1	0	2.00
Actual Sales	0	0	3	0	1	0	10	0	0	0	0	0													
Original Forecast																									RMFS
Latest Forecast																									
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									6				
On Order																									BSL
Calculated Closing Stock													0	0	4	2	0	0	0	0					
Actual/Cal Mthly Stk Cov													0.00	.00	2.00	1.00	.00	.00	.00	.00					
000065	28VKM				B7 4X10"X100S FW								Low Value									134	106	203	3.00
Actual Sales	33	66	40	50	115	181	153	123	143	147	72	160													
Original Forecast																									RMFS
Latest Forecast																									
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									501				
On Order													100												BSL
Calculated Closing Stock													169	35	402	268	134	0	0	0					
Actual/Cal Mthly Stk Cov													1.26	.26	3.00	2.00	1.00	.00	.00	.00					
000067	28VOU				B7 4X15"X100S FW								Low Value									117	124	418	3.00
Actual Sales	312	125	106	35	118	95	135	104	132	127	69	141													
Original Forecast																									RMFS
Latest Forecast																									
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									184				
On Order													100												BSL
Calculated Closing Stock													401	284	351	234	117	0	0	0					
Actual/Cal Mthly Stk Cov													3.43	2.43	3.00	2.00	1.00	.00	.00	.00					
000210	27J78				D7 70MMX90M PE								Medium Value									62	56	156	2.00
Actual Sales	32	50	56	18	104	46	28	74	63	124	26	56													
Original Forecast																									RMFS
Latest Forecast																									
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									154				
On Order																									BSL
Calculated Closing Stock													94	32	124	62	0	0	0	0					
Actual/Cal Mthly Stk Cov													1.52	.52	2.00	1.00	.00	.00	.00	.00					

Figure G.12. Stock Reorder Proposal Details Report: Page 6.
(Sorted by Categories)

St. Gabriel's Library

AE (Thailaod) Co.,Ltd.

Reorder Proposal Details
For November 1999 Arrival In January 2000
(BANGKOK)

Page 7
Date : 21/1/00

Department : 085 Diagnostic
Supplier :
Prod. Group : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Class :

Category: 03 Fast Moving

Based On AMS Past 6 Month
Reorder Based On Forward Month's Forecast: Y

SKU'S	199811	199812	199901	199902	199903	199904	199905	199906	199907	199908	199909	199910	199911	199912	200001	200002	200003	200004	200005	200006	Proposed Reorder Qty	AMS 6 Mths Past	AMS 12 Mths Past	Opening Stk Bal 199911	Target Stock Cover
000293	3J31V				STRUCT D4 BLR 70MMX305M								High Value									2	1	0	1.50
Actual Sales	0	0	0	0	0	0	0	8	8	3	0	6													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									5				
On Order																									BSL
Calculated Closing Stock													0	0	3	1	0	0	0	0					-
Actual/Cal Mthly Stk Cov													0.00	.00	1.50	.50	.00	.00	.00	.00					
000450	38WRN				G335 2X30 LITS FIXER								Low Value									15	9	22	3.00
Actual Sales	9	3	6	0	2	0	0	9	0	4	3	72													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									60				
On Order																									BSL
Calculated Closing Stock													7	0	45	30	15	0	0	0					-
Actual/Cal Mthly Stk Cov													0.47	.00	3.00	2.00	1.00	.00	.00	.00					
000465	293Q2				STRUCTURIX D5 70MMX90M PB								Low Value									68	59	46	3.00
Actual Sales	70	40	74	32	58	28	56	70	86	72	64	35													
Original Forecast																									RMFS
Latest Forecast																									-
Act/Orig/latest Fcst in %	0.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00									262				
On Order													100												BSL
Calculated Closing Stock													78	10	204	136	68	0	0	0					-
Actual/Cal Mthly Stk Cov													1.15	.15	3.00	2.00	1.00	.00	.00	.00					

Figure G.13. Stock Reorder Proposal Details Report: Page 7.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Reorder Proposal Summary
For November 1999 Arrival In January 2000
(BANGKOK)

Page: 1
Date: 21/1/00

Supplier :
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

Category: 01 Slow Moving

Based On AMS Past 6 Months
Reorder Based On Forward Month's Forecast: Y

	Article Description	Part No	Art. No		Units Ctn	Stock Bal (a)	<Order Coming In> Ord. No	PO Date	ETA	Qty (b)	Stock (a) + (b)	AMS	Dur to Div Sales Avg	Stock Cover Average	Prop. Reord. Qty	Prop. Reord. Qty(Ctn)	Manual Adj(Qty) +/-	Total Reord. Qty	Cal Month Turnover
	Model:																		
1	D8P 70MMX305M	2PLYV	000294	High Value	1	0					0	0	0	0.00	1	1		1	#DIV/0
2	STRUC D4 35X43CMX100S DW	3JZ4W	000450	High Value	1	0					0	0	0	0.00	1	1		1	#DIV/0
3	STRUC D7 35X43CMX100S DW	280FJ	000517	High Value	1	0					0	0	0	0.00	1	1		1	#DIV/0
4	STRUC D7 30X40CMX100S FW	27LH1	000219	Medium Vak	1	0					0	0	0	0.00	1	1		1	#DIV/0
5	STRUCTURIX D4 70MMX90M PB	3JICG	000655	Medium Vak	1	0					0	0	0	0.00	1	1		1	#DIV/0
6	STRUCT CERTIFIED DENSTEP	3UEPB	000725	Medium Vak	1	0					0	0	0	0.00	1	1		1	#DIV/0
7	STRUCT D4 11.4CMX43CM PB	3J1P6	000800	Medium Vak	1	0					0	0	0	0.00	1	1		1	#DIV/0
8	STRUCT D4 11.4CMX43CM DW	3JZZO	000801	Medium Vak	1	0					0	0	0	0.00	1	1		1	#DIV/0
9	STRUCT D7 18CMX43CM DW	28N3Q	000802	Medium Vak	1	0					0	0	0	0.00	1	1		1	#DIV/0
10	STRUC D4 30X40CM 100'S FW	3GTOS	000925	Medium Vak	1	0					0	0	0	0.00	1	1		1	#DIV/0
11	STRUCT D7 ROLLP PB 100MMX90M	28LUZ	001048	Medium Vak	1	0					0	0	0	0.00	1	1		1	#DIV/0
12	ASTM WIRE PENE SET A		000990	Low Value	1	0					0	0	0	0.00	1	1		1	#DIV/0
13	ASTM WIRE PENE SET B		000991	Low Value	1	0					0	0	0	0.00	1	1		1	#DIV/0
14	STRUCT D5 PB RPAC DIS 70MMX90M	293O2	001104	Low Value	1	0					0	0	0	0.00	1	1		1	#DIV/0
														Model sub total				14	
														Sub total for category 01				14	

Figure G.14. Stock Reorder Proposal Summary Report: Page 1.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Reorder Proposal Summary
For November 1999 Arrival In January 2000
(BANGKOK)

Page: 2
Date: 21/1/00

Supplier :
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

Category: 02 Medium Moving

Based On AMS Past 6 Months
Reorder Based On Forward Month's Forecast: Y

	Article Description	Part No	Art. No		Units Ctn	Stock Bal (a)	Ord. No	<Order Coming In> PO Date	ETA	Qty (b)	Stock (a) + (b)	AMS	Cur to Div Sales Avg	Stock Cover Average	Prop. Reord. Qty	Prop. Reord. Qty(Ctn)	Manual Adj(Qty) +/-	Total Reord. Qty	Cal Month Turnover
	Model:																		
15	STRUC D7 18X43CM 100'S FW	28U3L	000553	Medium Vsh	1	2					2	1	1	1.50	3	3		3	2.00
16	STRUCT D7 25.4X30.5CM 100'S FW	28V5T	000987	Medium Vsh	1	1					1	1	1	1.50	3	3		3	2.00
														Model sub total				6	
														Sub total for category 02				6	

Figure G.15. Stock Reorder Proposal Summary Report: Page 2.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Reorder Proposal Summary
For November 1999 Arrival In January 2000
(BANGKOK)

Page: 3
Date: 21/1/00

Supplier :
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

Category: 03 Fast Moving

Based On AMS Past 6 Months
Reorder Based On Forward Month's Forecast: Y

	Article Description	Part No	Art. No		Units Ctn	Stock Bal (a)	Ord. No	<Order Coming In> PO Date	ETA	Qty (b)	Stock (a) + (b)	AMS	Cur to Div Sales Avg	Stock Cover Average	Prop. Reord. Qty	Prop. Reord. Qty(Ctn)	Manual Adj(Qty) +/-	Total Reord. Qty	Cal Month Turnover
	Model:																		
17	STRUCT D4 BLR 70MMX305M	3J21Y	000293	High Value	1	0					0	2	2	1.50	5	5		5	1.50
18	STRUC D7 35X43CMX100'S FW	27LMA	000065	Medium Valu	1	0					0	2	2	2.00	6	6		6	2.00
19	D7 70MMX90M PB	27J7Z	000210	Medium Valu	1	156					156	62	62	2.00	154	154		154	2.00
20	STRUC D4 4X10" 100'S FW	3J35C	000061	Low Value	1	116	PS7271	19990905	19991130	100	216	58	58	3.00	132	132		132	3.00
21	D7 4X10"X100S FW	28VKM	000066	Low Value	1	203	PS7271	19990905	19991130	100	303	134	134	3.00	501	501		501	3.00
22	D7 4X15"X100S FW	28VOU	000067	Low Value	1	418	PS7271	19990905	19991130	100	518	117	117	3.00	184	184		184	3.00
23	G335 2X20 LITS FIXER	38WRN	000650	Low Value	1	22					22	15	15	3.00	60	60		60	3.00
24	STRUCTURDX D5 70MMX90M PB	293Q2	000665	Low Value	1	46	PS7271	19990905	19991130	100	146	68	68	3.00	262	262		262	3.00
														Model sub total				1304	
														Sub total for category 03				1304	

Figure G.16. Stock Reorder Proposal Summary Report: Page 3.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Reorder Proposal Summary
For November 1999 Arrival In January 2000
(BANGKOK)

Page: 4
Date: 21/1/00

Supplier :
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls : SPL

Category: 01 Slow Moving

Based On AMS Past 6 Months
Reorder Based On Forward Month's Forecast: Y

	Article Description	Part No	Art. No		Units Ctn	Stock Bal (a)	Ord. No	<Order Coming In> PO Date	ETA	Qty (b)	Stock (a) + (b)	AMS	Cur to Div Sales Avg	Stock Cover Average	Prop. Reord. Qty	Prop. Reord. Qty(Ctn)	Manual Adj(Qty) +/-	Total Reord. Qty	Cal Month Turnover
	Model:																		
25	D7 70MMX90M PB	27J78-SPL	001041	Low Value	1	0					0	0	0	0.00	1	1		1	#DIV/0
26	D7 4X15" 100'S FW	28VOU-SPL	001045	Low Value	1	0					0	0	0	0.00	1	1		1	#DIV/0
														Model sub total				2	
														Sub total for category 01				2	
																	Grand Total	1326	

Figure G.17. Stock Reorder Proposal Summary Report: Page 4.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Purchase Order For November 1999
(BANGKOK)

Page: 1
Date: 21/1/00

Supplier : 100139 Fenner Limited
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

	Article Description	Part No	Art. No	Units Ctn	C&F (MYR)/Unit	Prop. Reord. Qty(Ctn)	Prop. Reord. Qty	C&F (MYR)
1	STRUC D4 4X10" 100'S FW	3J35C	000061	1	28.000	132	132	3696.00
2	STRUC D7 35X43CMX100'S FW	27LMA	000065	1	419.400	6	6	2516.40
3	D7 4X10"X100S FW	28VKM	000066	1	55.670	501	501	27890.67
4	D7 4X15"X100S FW	28VOU	000067	1	84.380	184	184	15525.92
5	D7 70MMX90M PB	27J78	000210	1	221.400	154	154	34095.60
6	STRUC D7 30X40CMX100S FW	27LH1	000219	1	372.000	1	1	372.00
7	STRUCT D4 BLR 70MMX305M	3J21Y	000293	1	540.000	5	5	2700.00
8	D8P 70MMX305M	2PLYV	000294	1	540.000	1	1	540.00
9	STRUC D4 35X43CMX100S DW	3JZ4W	000450	1	597.000	1	1	597.00
10	STRUC D7 35X43CMX100S DW	280FJ	000517	1	597.000	1	1	597.00
11	STRUC D7 18X43CM 100'S FW	28U3L	000553	1	216.000	3	3	648.00
12	G335 2X20 LITS FIXER	38WRN	000650	1	38.120	60	60	2287.20
13	STRUCTURIX D4 70MMX90M PB	3JICG	000655	1	240.000	1	1	240.00
14	STRUCTURIX D5 70MMX90M PB	293Q2	000665	1	60.780	262	262	15924.36
15	STRUCT CERTIFIED DENSTEP	3UEPB	000725	1	150.000	1	1	150.00
16	STRUCT D4 11.4CMX43CM PB	3J1P6	000800	1	342.850	1	1	342.85
17	STRUCT D4 11.4CMX43CM DW	3JZZO	000801	1	197.000	1	1	197.00
18	STRUCT D7 18CMX43CM DW	28N3Q	000802	1	299.000	1	1	299.00
19	STRUC D4 30X40CM 100'S FW	3GTOS	000925	1	286.000	1	1	286.00
20	STRUCT D7 25.4X30.5CM 100'S FW	28V5T	000987	1	248.000	3	3	744.00
21	ASTM WIRE PENE SET A		000990	1	30.000	1	1	30.00
22	ASTM WIRE PENE SET B		000991	1	30.000	1	1	30.00
23	STRUCT D7 ROLLP PB 100MMX90M28LUZ		001048	1	378.000	1	1	378.00
24	STRUCT D5 PB RPAC DIS 70MMX90293O2		001104	1	0.000	1	1	0.00

Figure G.18. Purchase Order Report: Page 1.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Purchase Order For November 1999
(BANGKOK)

Page: 2
Date: 21/1/00

Supplier : 100139 Fenner Limited
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls : SPL

	Article Description	Part No	Art. No	Units Ctn	C&F (MYR)/Unit	Prop. Reord. Qty(Ctn)	Prop. Reord. Qty	C&F (MYR)
25	D7 70MMX90M PB	27J78-SPL	001041	1	0.000	1	1	0.00
26	D7 4X15" 100'S FW	28VOU-SPL	001045	1	0.000	1	1	0.00
						Total :	1326	110087.00

Figure G.19. Purchase Order Report: Page 2.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Outstanding Order From November 1999 To January 2000
(BANGKOK)

Page: 1
Date: 21/1/00

Supplier :
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

	Article Description	Part No	Art. No	<Order Coming In> PO Date	ETA	Ord. No	Qty	Total
1	STRUC D4 4X10" 100'S FW	3J35C	000061	19990905	19991130	PS7271	100.00	100
2	D7 4X10"X100S FW	28VKM	000066	19990905	19991130		100.00	
3	D7 4X15"X100S FW	28VOU	000067	19990905	19991130		100.00	
4	STRUC D4 4X15" 100'S FW	3J3ET	000245	19990905	19991130		100.00	
5	STRUCTURIX D5 70MMX90M PB	293Q2	000665	19990905	19991130		100.00	
							Grand Total	500.00

Figure G.20. Outstanding Order within Reorder Cycle Period.
(Sorted by Categories)

AE (Thailand) Co.,Ltd.

Outstanding Order Outside The Reorder Cycle Months
From November 1999 To January 2000
(BANGKOK)

Page: 1
Date: 21/1/00

Supplier :
Department : 085 Diagnostic
Prod. Grp : 851 AGFA GEVAERT
Prod. Class : 1008 X-RAY INDUSTRIAL
Sub Prod. Cls :

	Article Description	Part No	Art. No	<Order Coming In> PO Date	ETA	Ord. No	Qty	Total
1	D7 4X10"X100S FW	28VKM	000066	19990902	19991010	PJ7269	100.00	100
2	G335 2X20 LITS FIXER	38WRN	000650	19990909	19991009	PS7276	60.00	60
3	STRUCTURIX D5 70MMX90M PB	293Q2	000665	19990902	19991010	PJ7269	150.00	150
4	STRUCT F6 BLR 70MMX250M	3UUSB	000798	19990909	19991009	PS7276	180.00	180
5	STRUCT D7 25.4X30.5CM 100'S FW	28V5T	000987	19990902	19991010	PJ7269	10.00	10
							Grand Total	500.00

Figure G.21. Outstanding Order beside Reorder Cycle Period.
(Sorteded by Categories)

AE (Thailand) Co.,Ltd. **Categories Report By Department** Page: 1 Date: 21/1/00

Department : 085 Diagnostic

Prod. Group: NULL **Prod. Class: NULL** **Sub Prod. Class: NULL**

01 *Slow Moving* *1 or nil sales(in units) during past 12 mths* *(Figures based on past 6 months by Sales Unit where <= 1*

01	High Value	Based on the Unit Cost Where > 500.00	Top Up Value of 1.00
02	Medium Value	Based on the Unit Cost Where >= 100.00 and <= 500.00	Top Up Value of 1.00
03	Low Value	Based on the Unit Cost Where < 100.00	Top Up Value of 1.00

02 *Medium Moving* *2 to 5 sales during past 12 mths* *(Figures based on past 6 months by Sales Unit where > 1 and <6)*

01	High Value	Based on the Unit Cost Where > 500.00	Stock Cover of 1.50 months
02	Medium Value	Based on the Unit Cost Where >= 100.00 and <= 500.00	Stock Cover of 1.50 months
03	Low Value	Based on the Unit Cost Where < 100.00	Stock Cover of 2.00 months

03 *Fast Moving* *6 or more sales during past 12 mths* *(Figures based on past 6 months by Sales Unit where >= 6*

01	High Value	Based on the Unit Cost Where > 500.00	Stock Cover of 1.50 months
02	Medium Value	Based on the Unit Cost Where >= 100.00 and <= 500.00	Stock Cover of 2.00 months
03	Low Value	Based on the Unit Cost Where < 100.00	Stock Cover of 3.00 months

04 *Spare parts for newly intr 12 months from purchase date of 1st unit* *(Figures based on past 6 months by Sales Unit where <= 12*

01	High Value	Based on the Unit Cost Where > 500.00	Top Up Value of .10
02	Medium Value	Based on the Unit Cost Where >= 100.00 and <= 500.00	Top Up Value of .15
03	Low Value	Based on the Unit Cost Where < 100.00	Top Up Value of .20

Figure G.22. Categories Report by Department.

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