PERSONNEL ADMINISTRATION INFORMATION SYSTEM (PAIS) OF PQ CHEMICALS (THAILAND) LTD.

by

Ms. Ratana Srisueb

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

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Computer Information Systems
Assumption University

November, 2000

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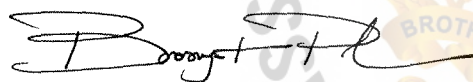CS 6998 System Development Project

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Project Title‹   Personnel Administration Information System (PAIS) of PQ Chemicals (Thailand) Ltd.

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Academic Year   November 2000

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

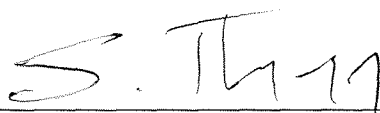Approval Committee:

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ABSTRACT

This project comprises system analysis, designs, and implementation of the Personnel Administration Information System (PAIS) for PQ Chemicals (Thailand) Ltd. The main objective of the project is to implement a new computerized personnel system that can cope with an expansion of the company in personnel administration functions.

The existing system is not capable of doing the personnel jobs due to limitations of the system application. For example data are collected and stored in many locations, data cannot be shared among users, and system cannot produce useful information needed by the management for decision making. These create lots of redundant work for personnel staff.

Therefore a new system is proposed based on the management and users' requirements. The system provides a variety of personnel administration functions in an integrated and comprehensive manner. The proposed system does not only solve the problems encountered by the existing system, it also assists the personnel staff to better manage the data, produces the necessary requested reports for the high-level management, and provides flexibility for future expansion in personnel administration functions.

ACKNOWLEDGEMENTS

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Also, the wishes to thank the personnel staff and IT Manager of PQ Chemicals (Thailand) Ltd., who provided her with useful information necessary for analyzing the system and thus greatly contributed to her project completion.

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1.1 Background of the Project

PQ Chemicals (Thailand) Ltd. wants to upgrade and develop its information system in support of a more efficient and reliable administration for personnel administration functions in order to optimize staff utilization.

In personnel administration operations, the company currently uses the software package called Power Payroll. As the name implied, its main duties are for payroll processes. It was installed on a stand-alone PC, runs on DOS and is now already obsolete.

Since the installation of this software package in 1991, it yielded some disadvantages over the period as the company has separated into two operating locations, Bangkok and Laem Chabang. The problems of existing system are as follows:

(1) The existing system was installed on stand-alone PC with a single user so another user in Laem Chabang plant cannot share the information.

(2) The existing system is unable to generate necessary reports such as monthly overtime reports, employee services year, employee promotion history, and employee training records. Each time special reports are required, personnel staff have to develop their own spreadsheet for these specific purposes.

(3) The system capability is very limited. Only one staff can get access into the system and the main function of the system is for staff payroll.

(4)   The system does not share between two locations so an uncontrollable transaction and disperse of data are obviously observed. For example, multiple input of the same data between two locations frequently occurred and it has to be eliminated.

(5)   The data are not up to date and are unreliable.

A new tool in the form of integrated software package has to assist in solving the problems with the existing system. The ideal package must be user friendly, be able to print all key standard documents and provide both standards as well as ad hoc reports for the management decision and long-term planning support.

1.2   Objectives of the Project

The objectives of this project are summarized below:

(1)   To study the existing system processes, define all requirements for the development of the new software package. The study will emphasize on all necessary output such as reports and forms needed for personnel administration operations, planning and control reasons.

(2)   To study the detailed specification of new software package, justify and make decision if this new package can serve the company requirements for personnel administration functions.

(3)   To set up the new system to accelerate the personnel administration transaction between two operating locations, and to minimize delay of transaction time between locations.

(4)   To design a new computerized Personnel Administration Information System (PAIS) in order to collect all employee information based on the database management system, where information can be shared and easily retrieved.

(5)   To reduce works done by manual operations.

(6)   To solve problems of data entry duplication, lengthy processing time, and high operating cost.

1.3   Scope of the Project

The project covers all processes related to the personnel administration functions, which can be classified into four areas as follows:

(1)   Personal information.

Collecting information of employee including employee personal information, salary history, employee promotion history, educational backgrounds, and employee skills.

(2)   Manpower planning information.

Support of information for the management in manpower planning and personnel movement.

(3)   Managing and maintaining employee information.

The personnel department will keep records of staff in various fields, e.g. leave record, training record, attendance records, overtime (OT) records, and employee performance record.

(4)   Employee income and expense.

The study will provide information on staff payroll, tax, social security fund and provident fund deductions, other deductions, overtime payment, allowance payment, and net income.

1.4   Deliverables

(a)   A new database design of employee and employee related information.

(b)   Standard reports such as

(1)   Employee Attendance Report

(2)   Employee Personal Information

(3)   Employee Skills

(4)   Employee Promotion History

(5)   Employee Salary Adjustment Record

(6)   Employee Training Record

(7)   Employee Payroll

(8)   Employee Education Background

(9)   Employee Performance

(10)   Employee Institute

(c)   User Interface and User Manual

1.5 Project Plan

The project plan uses Gantt chart to illustrate stages of the project from beginning until the end of the system development process.

Figure 1.1 shows Gantt chart which falls on the following page.

NO.	Task Name	Mar week 1	Mar week 2	Mar week 3	Mar week 4	Apr week 1	Apr week 2	Apr week 3	Apr week 4	May week 1	May week 2	May week 3	May week 4	Jun week 1	Jun week 2
I.	System Analysis														
1	Study the current system														
2	Model the current system														
3	Analyze the business process														
4	Outline the business requirements														
5	Identify problems and solutions														
II.	System Design														
6	System design and business process														
7	Database design														
8	Output/Input design														
9	Hardware/software specifications														
10	Security and control														
11	Cost/benefit analysis														
III.	System Implementation														
12	System testing														
13	Train the users														
14	System conversion														
15	Evaluate the system performance														
16	Conclusion and recommendation														

Figure 1.1.   Project Plan (Gantt Chart).

II. EXISTING SYSTEM

2.1 Background of the Organization

PQ Chemicals (Thailand) Ltd., in short PQCT, is an affiliate of the PQ Corporation, the largest supplier of detergent zeolite in the United States.

PQCT is a small-size manufacturing company comprising two operating locations. The head office is located in Bangkok, and mainly responsible for accounting and personnel administration functions. The manufacturing plant is located in Laem Chabang Industrial Estate, Chonburi. The plant is responsible for production of detergent zeolite.

The manufacturing plant has a production capacity of up to 40,000 metric ton per year. Raw materials for production are imported from abroad. The final product are exported to the PQ Corporation in the United States for sales over the North America.

One of major concerns of the company is human resource. The total number of employees at PQCT is 72, of which 13 work in Bangkok and the rest are operational staff and management staff located in Laem Chabang Industrial Estate.

Due to future expansion, the management realizes that staff are important resources of the company to be managed in order to meet the company objectives. Utilization of employees is a major concern in order to increase efficiency and effectiveness of overall business operation.

An organization chart of PQ Chemicals (Thailand) Ltd. is provided on the following page (Figure 2.1) in order to show the company lines of operations.

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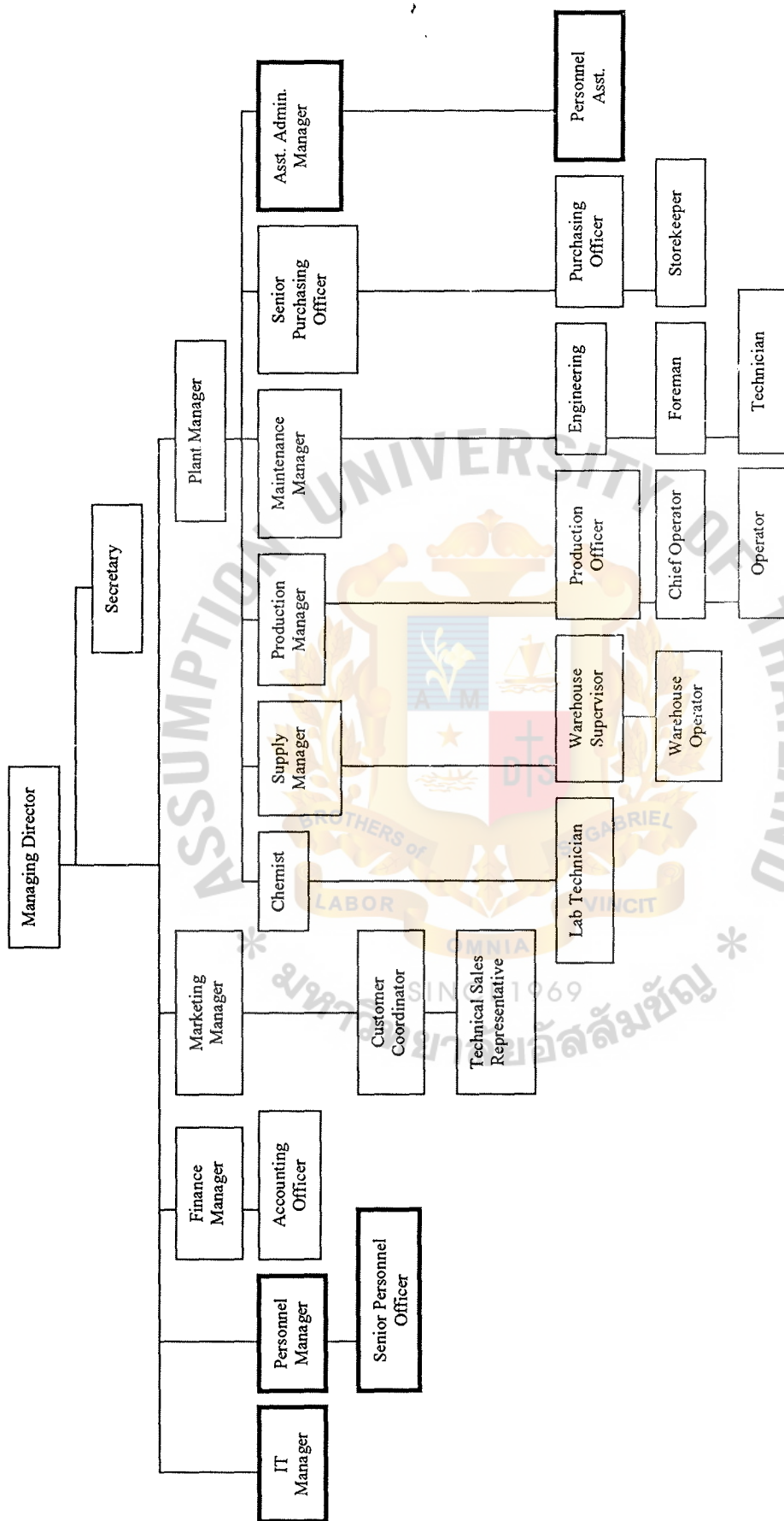
Source: PQ Chemicals (Thailand) Ltd.

Note: Highlighted blocks are under the scope focuses for the project

Figure 2.1.   PQ Chemicals (Thailand) Ltd. Organization Chart.

2.2 Existing System and Business Process

An existing system for personnel management currently used at the company is called Power Payroll. The system is used for:

(1) Staff payroll process at month-end.

(2) Income tax, social security funds, provident funds, and net income calculations.

(3) Printing of payroll reports for internal (Management) and external uses (The Revenue Department).

(4) Printing of pay slips for staff at month-end.

2.2.1 Process of the Existing System

Major processes of existing system consists of employee information, manpower planning, income and expenses process, and reports and pay slip printing.

Existing system processes are illustrated in Figure A.2, Appendix A by using the context diagram and the data flow diagram.

<u>Process 1</u>: Maintain employee information

(1) Personnel staff receives employee information.

(2) Personnel staff records new employee information into the system.

(3) Personnel staff update staff movements, e.g. new employment, and personal information changes.

(4) Personnel staff record leaves information.

(5) Personnel staff prepare employee information reports.

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Process 2: Manpower planning

(1) Management receives employee information reports.

(2) Management plans for new employment.

(3) Personnel staff process for new employment.

(4) Personnel staff verify qualifications of the applicants.

(5) Personnel staff select applicant.

(6) Management approves new employment.

Process 3: Employee income and expenses process

(1) Personnel staff update employee attendance record and OT record.

(2) System calculates income tax, social security fund, provident fund deductions, and net income of each employee.

(3) System prints net income report.

(4) Personnel staff submits net income report for Accounting Department.

(5) Accounting Department handle payment for employee.

Process 4: Reports and pay slip printing process

(1) Personnel staff updates employee information.

(2) System prints out reports for personnel staff.

(3) Personnel staff submits printed report for internal use (Management) and external use (The Revenue Department).

(4) System prints out pay slip for employee at month-end.

(5) Personnel staff distributes pay slip to employee.

2.2.2 Inputs of the Existing System

Input comes from various sources of each department. Input can be from internal memo, application forms, leaves request form, employee evaluation form, OT request form, etc. Example of input forms is in the Appendix C.

2.2.3 Outputs of the Existing System

Output of the existing system consists of payroll report, pay slip, and employee personal information. Other types of reports are prepared manually by the personnel staff according to the management requirements.

2.3   Current Problems and Areas for Improvement

Problems of the existing system are explained as follows:

(1)   Only one user can get access to the system. The other users cannot share resources.

(2)   Limitation of system capability. The system operates for payroll purpose only.

(3)   Lack of input edit control.

(4)   No error detection and security control.

(5)   Duplication of data entry between two operating locations especially when special report is needed.

(6)   The system cannot generate necessary reports for the management decision making. Most reports are prepared manually.

(7)   Lengthy processing time.

(8)   The system cannot provide accurate and an up-to-date information to serve the management needs.

(9)   System is inflexible for future change.

2.4 Existing Computer System

(Includes Hardware, Software, and Peopleware)

Resources of the existing system consists of the following categories:

(1) Hardware

- 5 sets of PC

- 1 set of dot-matrix printer

- 1 set of laser printer

- 1 set of UPS (Uninterruptable Power Supply) 500 VA

(2) Software

- Software package called Power Payroll

- Ms Dos V. 6.x

(3) Peopleware

- Personnel Manager

- Senior Personnel Officer

- Asst. Personnel Manager

- Personnel Assistant

- IT Manager

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III. PROPOSED SYSTEM

3.1 User Requirements

After several discussions with the management of the company, we came to the conclusion that the new system must have at least the following capabilities.

(1) User friendly interfaces with menu-driven and full screen editing.

(2) One system will be shared between two locations (Bangkok and Laem Chabang).

(3) The new system should provide test data, sample reports, and forms that it can provide for the management decision making and long-term planning.

(4) The new system must provide standard reports such as employee attendance report, leave report, employee personal information, promotion history, salary adjustment report, etc.

(5) The system must have high level of data security and control.

(6) The system must provide shared access to the data resources for the management and other authorized staff in Personnel Department.

(7) Share resources concept will eliminate duplication of data entry.

(8) The new system should provide standard input screen and standard output report that is easy for the users to operate and to understand.

(9) Processing time must be improved.

(10) The new system must be flexible for future development, expansion, and implementation with a minimum cost.

3.2 System Design

The proposed system design is based on the centralized database computing. The database server is located in Bangkok. It hosts all information system components including:

(1) Files and database; and

(2) Software and program.

Other components; e.g., user interface (input and output) is stored and executed on the client PC's. Wide Area Network (WAN) links all PCs from two operating locations using PC running Windows 98 and Windows NT. WAN allows the remote site to be able to get access into the database server in Bangkok.

3.2.1 Proposed System and Business Processes

Processes of the new system are illustrated in the Appendix A using the context diagram and the data flow diagrams. Proposed system consists of 9 processes, which can be described as follows:

Process 1: Manpower planning (See Figures A.5, A.6)

(1) Management reviews employee information report.

(2) Management plans for new employment by position and by department.

(3) Management approves manpower planning.

(4) Personnel staff prepares for new employment.

Process 2: Maintain employee information (See Figure A.7)

    (1)   Personnel staff receives employee information from the application form (See Appendix E).

    (2)   Personnel staff records new employee information into the system.

    (3)   Personnel staff updates employee information in case of personal data changes.

    (4)   Personnel staff prepares summary report as requested by the management.

    (5)   The system prints out reports to Personnel staff.

    (6)   Personnel staff submits reports to the management.

Process 3: Update employee movement (See Figure A.8)

    (1)   Personnel staff receives employee movement information from various Departments.

    (2)   Personnel staff updates employee movements, e.g. new employment, resignation, promotion, salary adjustment, and personal information changes.

    (3)   Personnel staff prepares summary report of employee movements.

Process 4: Employee leave record (See Figure A.9)

    (1)   Employee requests for leave. Fills in leave application form. (See Appendix E).

    (2)   Personnel staff receives leave application form and records leave information into the system.

    (3)   Personnel staff prepares attendance report.

Process 5: OT record (See Figure A.10)

    (1)   Management request OT work.

    (2)   Employee reports to the personnel staff for OT work.

    (3)   Personnel staff records OT of employees into the system.

    (4)   Personnel staff prepares OT report.

Process 6: Payroll record (See Figure A.11)

    (1)   At month end, personnel staff prepares payroll for employee via the system.

    (2)   The system calculates OT payment, allowances, income tax, social security fund, and provident fund deductions based on employee salary.

    (3)   The system calculates net income of each employee.

    (4)   The system prints out payroll report (net income statement).

    (5)   Personnel staff forwards report to the Accounting Department.

    (6)   Accounting Department pays salary to each employee through the bank account.

Process 7: Employee training record (See Figure A.12)

    (1)   Personnel staff receives training information from various sources.

    (2)   Personnel staff updates training information and schedule and announces to the employee.

    (3)   Employee requests for training.

    (4)   Management verify employee qualifications and approves employee requests.

    (5)   Personnel staff records training activity of each employee into the system.

Process 8: Calculate net income (See Figures A.13, A.14)

    (1)   At month end, system calculates net income for Accounting Department.

    (2)   System calculates OT rate, allowance, and other income of each employee.

    (3)   System calculates tax, social security fund, provident fund, and other deductions.

Process 9: Salary payment to employee (See Figure A.15)

    (1)   At month end, system calculates net income for Accounting Department.

    (2)   Accounting Department checks employee bank account.

    (3)   Accounting Department prepares for payment.

    (4)   Distribute pay slip to employee at month end.

    (5)   Arrange payment to employee account.

3.2.2 Database Design

The proposed database consists of 12 files, which are listed as follows:

    (1)   Employee file

    (2)   Department file

    (3)   Bank file

    (4)   Institute file

    (5)   Education file

    (6)   Employee movement file

    (7)   Skill file

    (8)   Training file

    (9)   Attendance file

    (10) Performance file

    (11) Payroll file

    (12) Applicant file

Database design, consists of 12 files. Each file describes its attributes and relationship with the other files in the system. Entity Relationship Diagram (ERD) also illustrates how each entity is related to the others.

Database design and Entity Relationship Diagram are shown in Appendix B.

3.2.3 Proposed Input Design

The proposed input designs of the new system are listed below:

(1)   User Identification and password verification

(2)   Main Program

(3)   Employee Personal Data

(4)   Employee Movement

(5)   Employee Training

(6)   Employee Education Background

(7)   Institute Menu

(8)   Employee Payroll

(9)   Employee Attendance

(10) Employee Performance

(11) Employee Skill

(12) Bank Information

(13) Report Printing Menu

Appendix F shows user interface designs and user manual of the above items.

The new user interface designs allow the user to enter the data into the system with minimum or less supervision. The user manual describes how to operate the PAIS program with simplicity of operations. Users can learn by themselves at real time. User training may be required only at the initial stage.

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3.2.4 Proposed Output (Report Layout)

The proposed output designs consist of various types of reports as shown in Appendix G, which consists of the following categories:

(1) Employee income statement (Pay slip)

(2) Employee personal data

(3) Employee payroll report

(4) Employee attendance report

(5) Employee movement report

(6) Employee educational backgrounds

(7) Employee skill

(8) Employee training record

(9) Employee performance

(10) Employee Institute

(11) Bank Information

Therefore, personnel officers do not need to develop their own spreadsheet for specific purposes, as requested by the management since the new system is able to print all required reports and information.

3.3 Hardware and Software Requirements

Hardware requirements for the proposed system are explained below.

Description		Quantity
(1) Personal Computer		5 sets
	Model	Pentium III 450 MHZ or higher
	SD RAM	64 Mb expandable to 256 Mb
	Hard Disk Drive	At least 4 GB

Description	Quantity
(6) LAN	1 set
- HUB (Star Network)	
- LAN Cable	
(7) UPS (For server back up)	1 set
(8) WAN	1 set
(9) Modem	3 sets

Software specifications for the proposed system are explained below.

Description

    (1)   Operating system

         - MS Windows 98 or above

         - Windows NT Server 5.0 for network application

    (2)   Database server

         - Microsoft SQL Server 6.5

    (3)   Software package

         - Personnel Administration Information System (PAIS)

Network configuration of the PAIS is illustrated in Figure 3.1. The proposed configuration shows relationship in structural design of Personnel Administration Information System (PAIS). The network configuration shows connection of the two operating locations using WAN concept. This new configuration allows users in different areas to be able to get access into the personnel resources.

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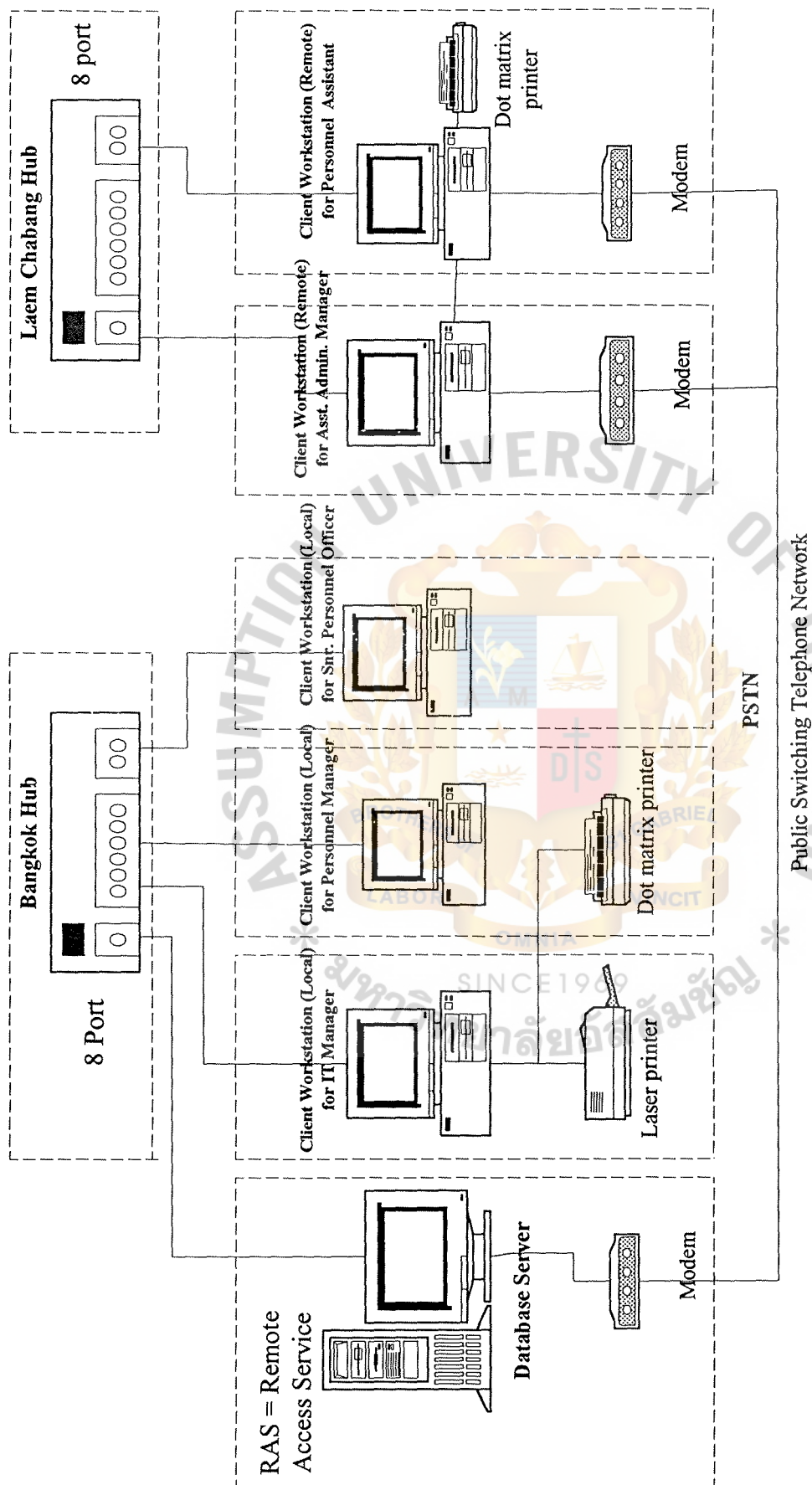
Figure 3.1.   Network Configuration of the Proposed System.

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3.4 Security and Control

(1) For system application over Wide Area Network, security can be checked from user identification menu, which provides level of security to each user.

(2) Access to the system requires user identification and a password in order to prevent an unauthorized person from gaining an access to the database.

(3) Every access to the database must be checked and verified.

(4) There must be a back up device for the main server to prevent loss of data resources in case of power failure, disk drive failure, or server failure. Back up process needs to be done periodically.

(5) Database is kept at the main server in Bangkok. All processing will be done at each client PC on-line so that the other user can view system operations. This will prevent duplications of data entry and data redundancy.

(6) Program testing is provided to certify the correctness of program executions.

(7) User may be allowed access to the database only during working hours.

(8) Structure of the database is to be protected. Modification of value of one field in each file does not affect other fields.

(9) Appoint an IT Manager as a system support agent to take care of an ongoing maintenance of a new system after it has been placed into operation. The activities include:

    (a) fixing software bugs during software construction,

    (b) recovering the system in case of a system failure caused by human error or hardware/software failure,

    (c) assisting the end-users, and

    (d) adapting the system to further requirements, e.g., new technical problems or new technology requirements.

3.5 Cost/Benefit Analysis

The cost/benefit analysis of the existing system and the proposed system are summarized in Table 3.1 and Table 3.2 respectively.

Table 3.1.   Estimated Cost of Existing System, Baht.

Cost Items	Description	Amount	Unit Price	Price
1. Development Cost:	1.1 Training cost for personnel staff	4	3,000.00 (per day for 2 days)	24,000.00
	Subtotal 1:			24,000.00
	1.2 Hardware: Existing PCs (Pentium 200MMX)	5	30,000.00	150,000.00
	Dot-matrix printer	2	10,000.00	20,000.00
	Subtotal 2:			170,000.00
	1.3 Software: Software package "Power Payroll"	1	30,000.00	30,000.00
	Ms Dos V. 6.x	5	4,000.00	20,000.00
	Subtotal 3:			50,000.00
	Total Development Cost			244,000.00
2. Operating Cost:	2.1 Personnel Cost: Personnel Manager	1	360,000.00	360,000.00
	Senior Personnel Officer	1	120,000.00	120,000.00
	Asst. Admin. Manager	1	144,000.00	144,000.00
	Personnel Asst.	1	96,000.00	96,000.00
	IT Manager	1	300,000.00	300,000.00
	Subtotal 1:			1,020,000.00
	2.2 Maintenance: Maintenance cost		40,000.00	40,000.00
	Office supply		36,000.00	36,000.00
	Purchased hardware and annually upgrades		50,000.00	50,000.00
	Training for new hardware		15,000.00	15,000.00
	Software annually Upgrade		5,000.00	5,000.00
	Subtotal 2:			146,000.00
	Total Operating Cost of existing system			1,166,000.00
	Total Projected Annual Cost			1,410,000.00

Table 3.2.   Estimated Cost of Proposed System, Baht.

Cost Items	Description	Amount	Unit Price	Price
1. Development Cost:	1.1 Training on new software and Windows 98	4	4,000.00	16,000.00
	Subtotal 1:			16,000.00
	1.2 Hardware: Server including tape back up UPS Network setup Modem Upgrade cost	1 1 3 5	150,000.00 3,000.00 20,000.00 3,000.00 10,000.00	150,000.00 3,000.00 20,000.00 9,000.00 50,000.00
	Subtotal 2:			232,000.00
	1.3 Software: Software package "PAIS" in house development Microsoft SQL	1 5	30,000.00 12,000.00	30,000.00 60,000.00
	Subtotal 3:			90,000.00
	Total Development Cost			338,000.00
2. Operating Cost:	2.1 Personnel Cost: Personnel Manager Senior Personnel Officer Asst. Admin. Manager Personnel Asst. IT Manager	1 1 1 1 1	360,000.00 120,000.00 144,000.00 96,000.00 300,000.00	360,000.00 120,000.00 144,000.00 96,000.00 300,000.00
	Subtotal 1:			1,020,000.00
	2.2 Maintenance: Maintenance cost Office supply Purchased hardware and annually upgrades		10,000.00 5,000.00 8,000.00	10,000.00 5,000.00 8,000.00
	Subtotal 2:			23,000.00
	Total Operating Cost of proposed system			1,043,000.00
	Total Projected Annual Cost			1,381,000.00

Table 3.3 and Table 3.4 show cost comparison between existing system and proposed system. When the new system being put into operation, the company could save annual operating cost at around 175,181 Baht per year.

Table 3.3. Cost Analysis of the Proposed System, Baht.

Cost Items	Years				
	1	2	3	4	5
Existing System:					
Personnel (5 staffs) Increase 5% per year	1,020,000	1,071,000	1,124,550	1,180,778	1,239,816
Training cost (Increase 5% per year)	24,000	15,000	15,750	16,538	17,364
Hardware cost	34,000	34,000	34,000	34,000	34,000
Hardware annually upgrade cost Increase 5% per year	0	50,000	52,500	55,125	57,881
Training for new hardware annually upgrade	0	15,000	15,750	16,538	17,364
Software cost and annually upgrade (Increase 5% per year)	50,000	5,000	5,250	5,513	5,788
System maintenance cost Increase 5% per year	40,000	42,000	44,100	46,305	48,620
Misc. (Office supply) Increase 5% per year	36,000	37,800	39,690	41,675	43,758
Total cost	1,204,000	1,269,800	1,331,590	1,396,470	1,464,593
Cumulative cost	1,204,000	2,473,800	3,805,390	5,201,860	6,666,452
Proposed System:					
Personnel (5 staffs) Increase 5% per year	1,020,000	1,071,000	1,124,550	1,180,778	1,239,816
Training cost	16,000	0	0	0	0
Hardware cost and annually upgrad cost 5% per year starting from year	232,000	11,600	11,600	11,600	11,600
Hardware upgrade cost	50,000	0	0	0	0
Software cost	18,000	18,000	18,000	18,000	18,000
Maintenance cost Increase 5% per year	10,000	10,500	11,025	11,576	12,155
Misc. (Office supply) Increase 5% per year	5,000	5,250	5,513	5,788	6,078
Total cost	1,351,000	1,116,350	1,170,688	1,227,742	1,287,649
Cumulative cost	1,351,000	2,467,350	3,638,038	4,865,779	6,153,428

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Table 3.4. The Comparison of the System Costs, Baht.

Year	Cumulative Cost of Existing System	Cumulative Cost of Proposed System	Diff.
1	1,204,000	1,351,000	-147,000
2	2,473,800	2,467,350	6,450
3	3,805,390	3,638,038	167,352
4	5,201,860	4,865,779	336,081
5	6,666,452	6,153,428	513,024
Average cost saving per year			175,181

In reference to the cost/benefit analysis in section 3.5, the cost of proposed system is $338,000 + 1,043,000x$ and the cost of existing system is $1,166,000x$, while x is the point of payback period in term of years.

Therefore, the equivalent point of years between the cost of proposed system and existing system is:

$$338,000 + 1,043,000x = 1,166,000x$$

$$338,000 = 123,000x$$

$$x = 2.74 \text{ years}$$

And the equivalent point of cost is $1,043,000 \times 2.74 = 2,857,820$ Baht.

Look at the cumulative lifetime cost of existing system and proposed system in Figure 3.2. The life time cost of existing system is gradually increasing over the five years' period while the cost of proposed system will undertake the cost of existing system between year 2 and 3 after it begins operations. It can be roughly summed up that the proposed system will save operation cost after year two.

Note that the management determined payback period of this project within 5 years and the above calculations has payback period of 2.74 years. Therefore, this project is a good investment.

Cost Comparison between Existing and Proposed System
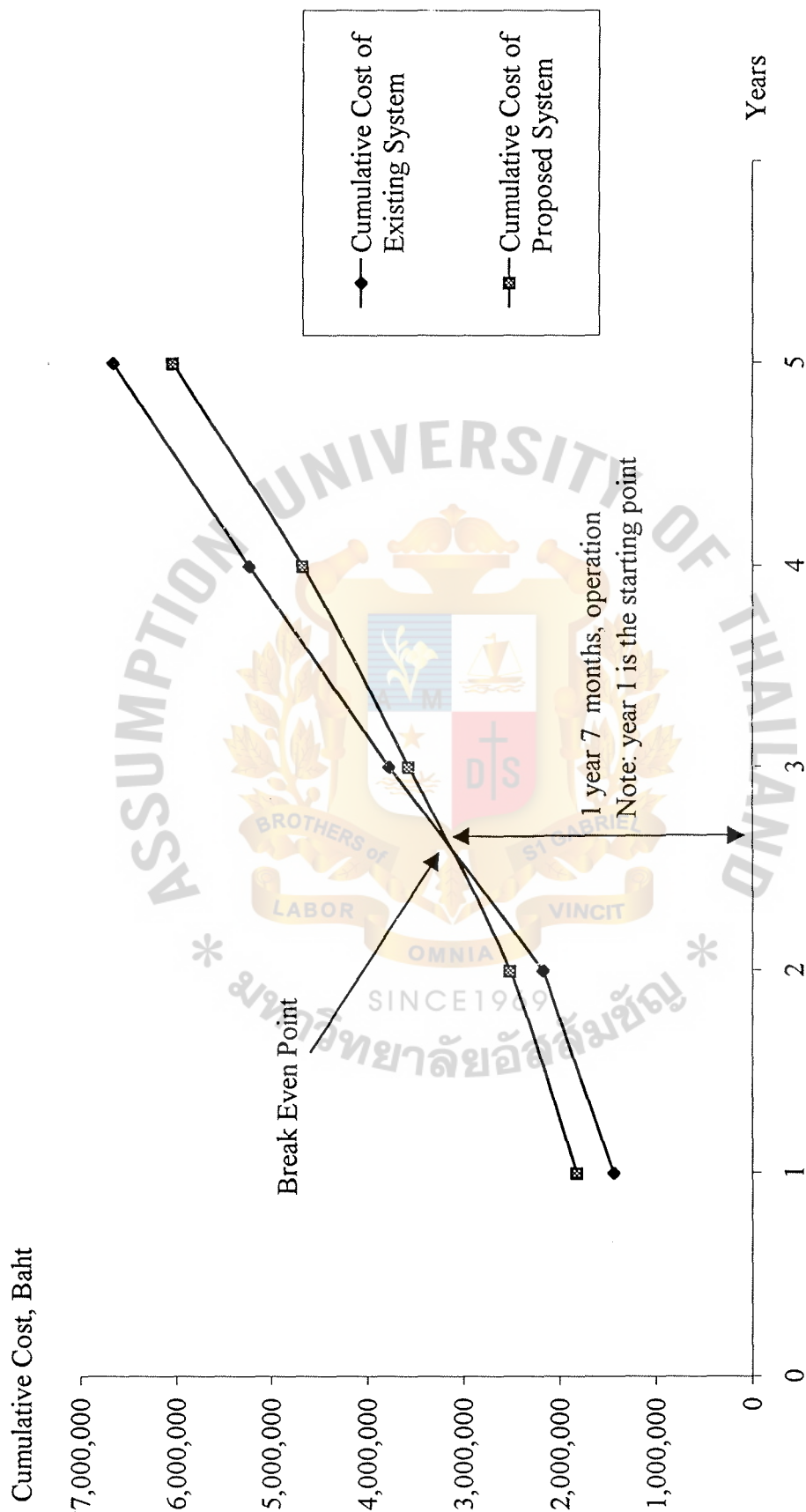
Figure 3.2. Cost Comparison between Existing and Proposed System.

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<u>Benefit Analysis</u>

The benefits of the new system are divided into 2 categories, tangible benefits and intangible benefits.

Tangible benefits are:

(1)   Reduced operating cost.

(2)   Faster processing time.

(3)   Faster access to information or data resources.

Intangible benefits are:

(1)   Problem of duplication of data entry between 2 locations is eliminated.

(2)   Personnel staff work is more efficient.

(3)   Manual operation of personnel staff is reduced.

(4)   Database is more secured.

(5)   Information is more reliable, accurate, and up to date.

IV. PROJECT IMPLEMENTATION

Project implementation is the process of having the new system put into operation, after the management of the company has approved the project. The implementation defines all technologies to be used for new system in terms of its network, data, process, and interface components. Each component is described respectively as follows:

Network components for client/server computing

Use client/server computing to manage the database, software and interface on a centralized network environment with the main server in Bangkok. Each personnel staff is doing their own work on a PC. Each client PC is connected using Wide Area Network (WAN).

Data components for centralized database computing

Use Windows NT server as a database server. The server stores database and execute all database instructions. It means that the database and tables are kept in the main server and the user can get access to the program across the network.

Process components for client/server computing

It consists of a client-base programming language with built-in SQL connectivity to the main server database engines. The software used for this purpose is Microsoft's Visual Basic (Client/Server Edition) which provides the graphical user interface (GUI) that will be replicated and executed on a client PCs.

Interface components for the system user

Use graphical user interface (GUI) which is stored and executed on the client PC. The client PC is running Windows 98. GUI provides user-friendly interface so even non-computerized person can learn the new program easily.

4.1 Program Testing

New system testing is to test the entire system using real data in order to test all processing operations under the normal condition such as software testing.

The main objective of the system test is to guarantee that the end users can successfully interact with the new system as well as serving the user requirements.

4.2 Training for Users

Training for the new system will be conducted at the end of the system implementation. It involves hardware training and software training.

Hardware training is provided for the technical support of the system to learn how to handle the system problems, to gain the knowledge of hardware and other accessories, and to learn how to maintain the system.

Software training is provided for the system users to learn how to use it. User manual is also provided in Appendix F.

4.3 System Conversion

Recommended parallel conversion between the old and the new system: both systems are in full operation for some period of time.

The parallel conversion has advantages that it ensures users' feeling of security and the ability to compare results with the old system. When everyone is satisfied with the results of the new system, the old system is removed.

4.4 New System Performance Evaluation

The performance evaluation consists of the following activities.

(1) Interview the end users and the management for the results of the new system periodically every 3 months.

(2) Examine output reports and screen displays.

(3) Compare cost of operations between the old and the new system and document benefits gained from the new system.

(4) List all problems that are encountered during system operations in order to find the right solutions to the new system.

(5) Measure the processing time of each instruction to make sure that the new system processing time is improved.
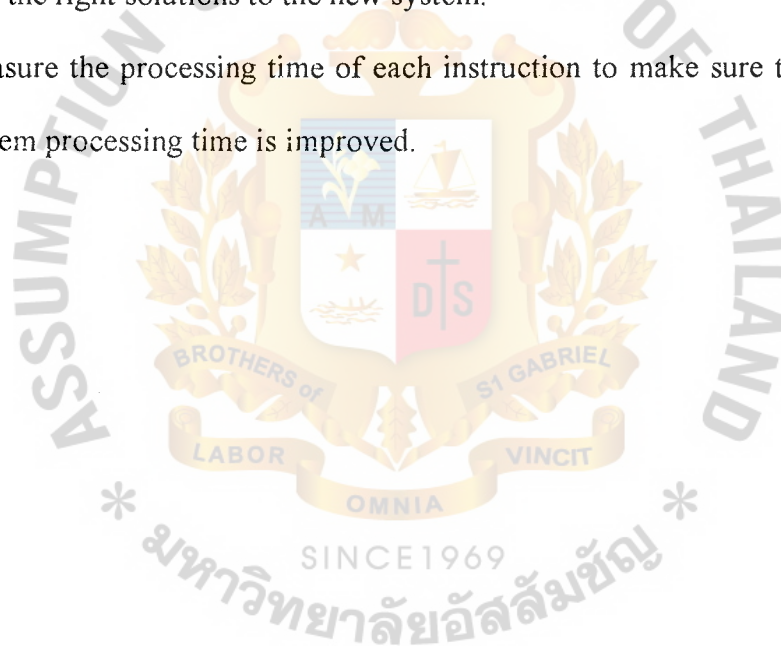
V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The Personnel Administration Information System (PAIS) was developed for PQ Chemicals (Thailand) Ltd. in order to solve the problems of inefficient existing system. The PAIS provides benefits to the organization both directly and indirectly. For example, processing time is improved, redundant operation is eliminated, and information can be shared among the users in different locations. The new system also provides accurate and up-to-date information for the management for decision making and for future manpower planning by generating necessary reports in various forms.

The new system is easy to use for the non-computerized users because of the implementation of the GUI, which allow the system users and administrator to maintain, develop, and expand the system for future changes. System capability is also expanded through the development of networking concept. Users of two locations can share and access to the same resources. Therefore, transaction of data can be controlled and managed and multiple inputs of data can be eliminated.

Establishment of the new system will accelerate the transaction between two locations, delay of processing time will be lessened. The most significant improvement of the new system development is reduction of annual operating cost, which will assist the company's business in the long run.

The over all performance on each process of the proposed system compared to existing system is shown in Table 5.1. Processing time is improved by reducing steps of work using the implementation of the new software. So, it can conclude that the proposed system is more efficient and effective than the existing system.

Table 5.1.   The Degree of Achievement of the Proposed System.

Process	Existing System	Proposed System
Manpower planning process	1.5 hrs.	1 hr.
Maintain employee information process	1.5 hrs.	45 mins.
Update employee movement process	2 hrs.	45 mins.
Leave recording process	1.5 hrs.	30 mins.
OT recording process	1.5 hrs.	30 mins.
Payroll recording process	2.5 hrs.	1 hr.
Training recording process	2 hrs.	1 hr.
Calculate net income process	45 mins.	30 mins.
Salary payment process	1.5 hrs.	45 mins.
Total	14 hrs. 45 mins.	6 hrs. 45 mins.

Note that each process of existing system is process manually except payroll recording, which can run automatically at the month end.

With the implementation of proposed system, all processes can be done automatically via the centralized database. These yield the significant of processing time improvement of all processes. Processing time of proposed system is reduced into half. For example, time to maintain employee information and update employee movement take only 45 minutes in each process via the centralized database whereas the existing system takes about 3 and a half hours. The existing system consumed too much time in preparing data, gather necessary information, which most of it have to be done manually.

5.2 Recommendations ,

The proposed system can be further developed using the following recommendations.

(1) The personnel activities concern all departments, which comprise many processes. In order to establish the workflow of every department, the proposed system must link all departments to exchange necessary information and support all processes to and from each department central workstations.

(2) At the moment, the company is developing the Intranet system. Therefore, the PAIS should be part of it, as a Personnel Department representation. Employee in all departments should be able to gain access to some personnel information via the Intranet. For example, employee can check status of leaves, request for leaves, check training course information, request for training, give suggestions to the Personnel Department, and get feedback. This will assist in reduction of communication cost between two operating locations, Bangkok and Laem Chabang.

(3) For future reference, all routine processes of proposed system should be documented. This will assist and accelerate in doing routine tasks for Personnel Department when there is a personnel change such as personnel officer left the company.

(4) Personnel officers use proposed system to print useful reports for the management. In order to reduce the use of paper and save miscellaneous office supply cost, the proposed system should continue the development on accessing the system on line, so that the management can view all necessary information and reports on the monitor.
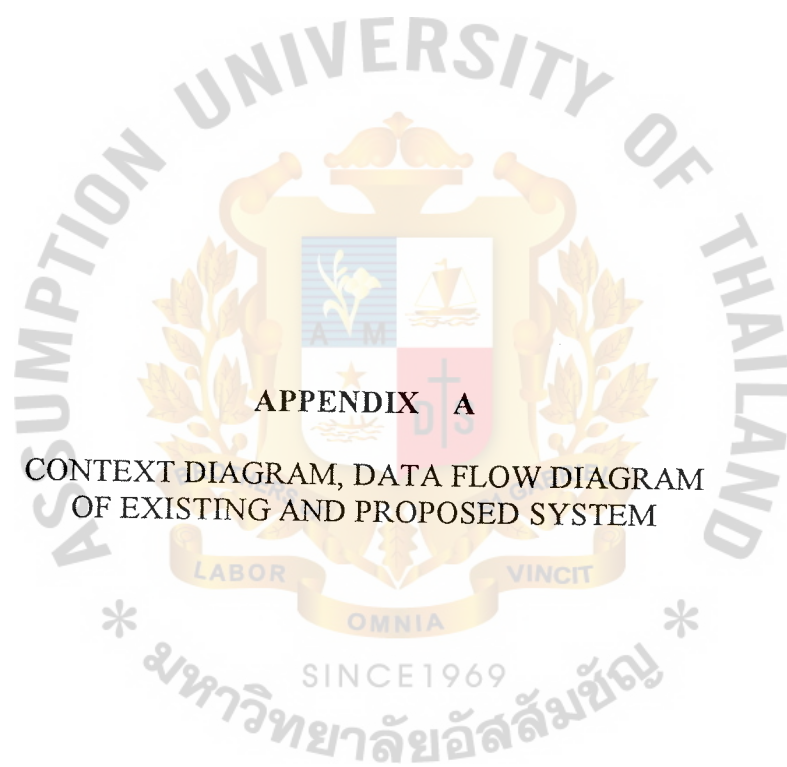
APPENDIX A

CONTEXT DIAGRAM, DATA FLOW DIAGRAM
OF EXISTING AND PROPOSED SYSTEM
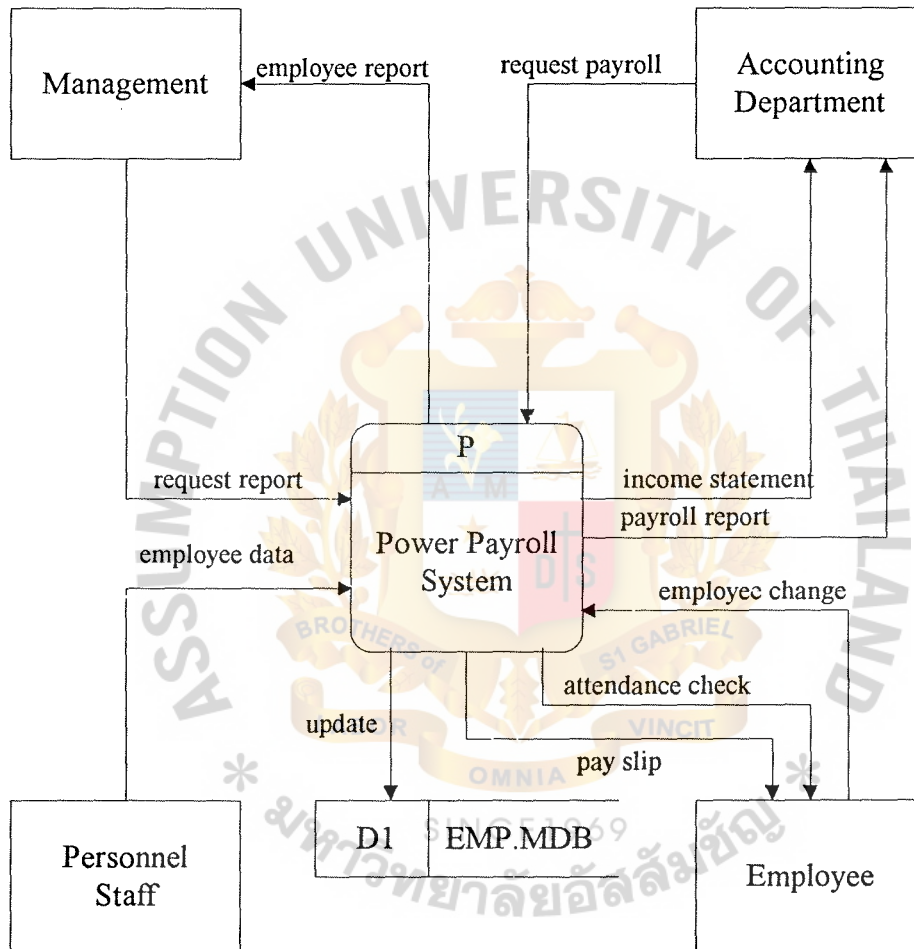
Figure A.1. Context Diagram of Existing System - Power Payroll.
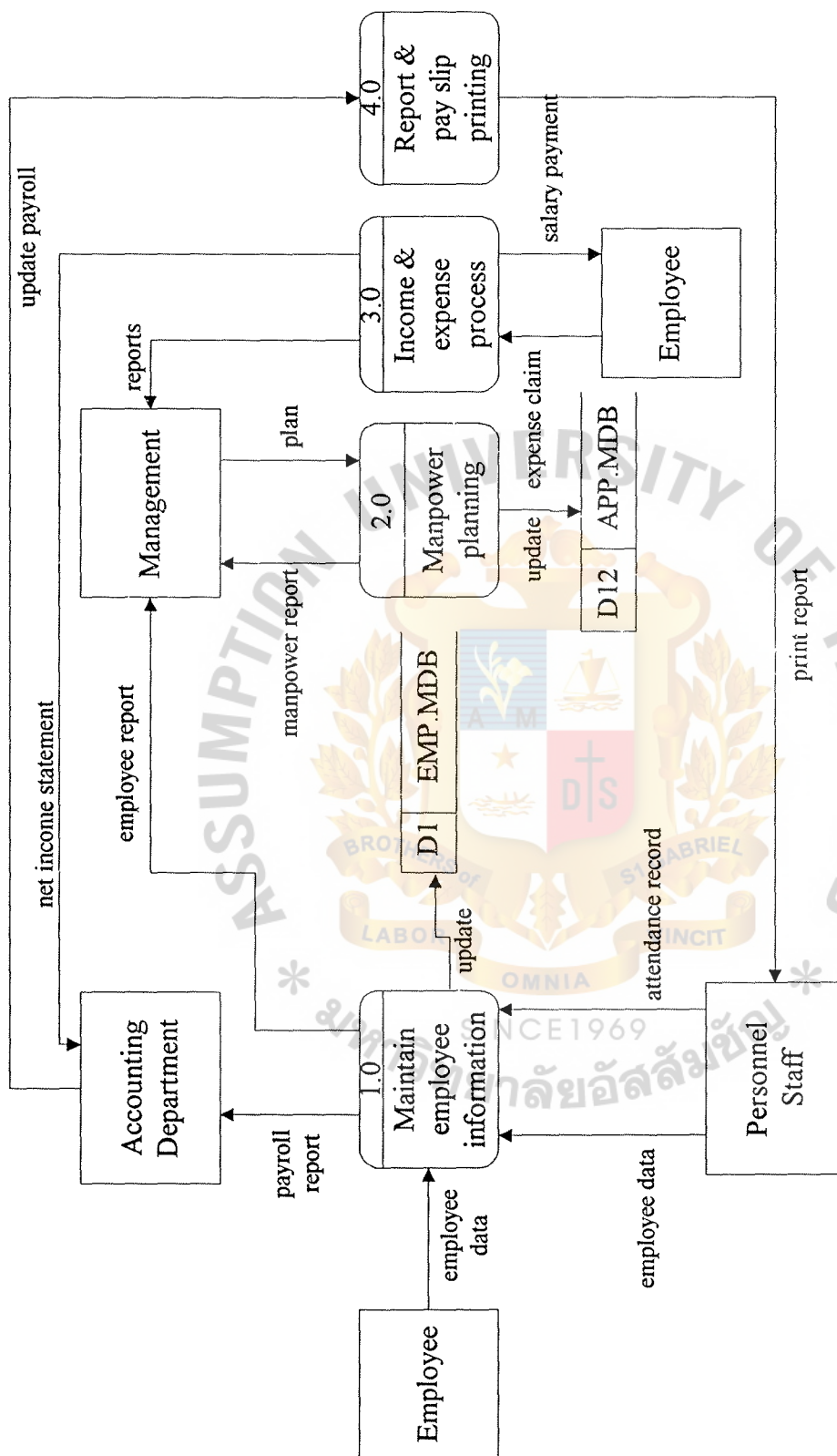
Figure A.2. Data Flow Diagram Level 0 of Existing System - Power Payroll.

35
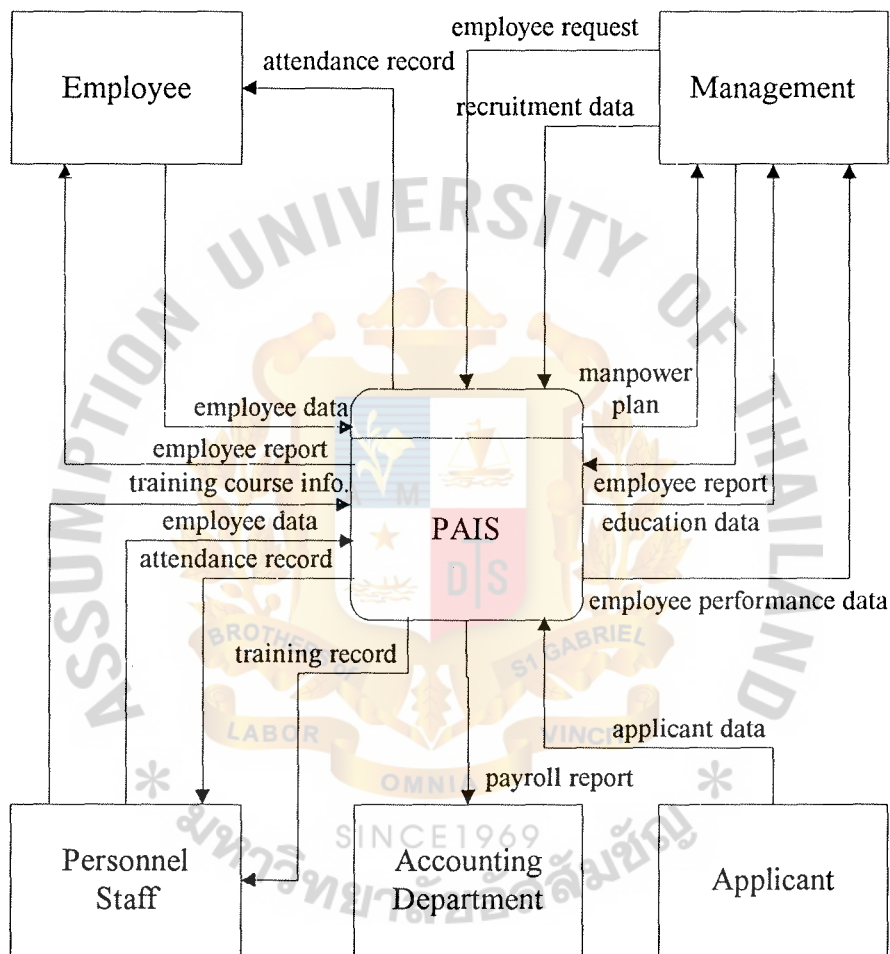
Figure A.3. Context Diagram of Proposed System - PAIS.
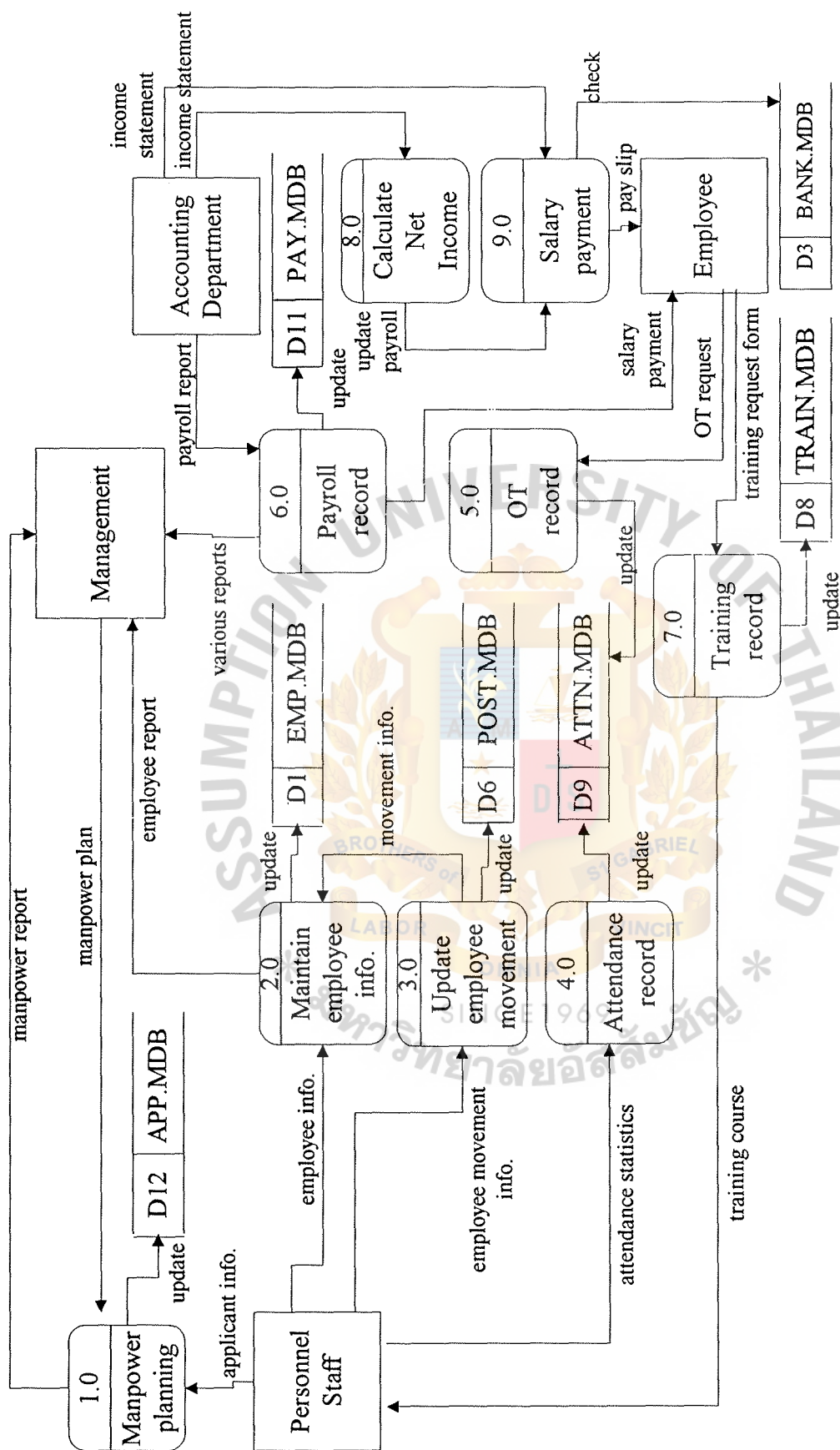
Figure A.4. Data Flow Diagram Level 0 of Proposed System - PAIS.

37
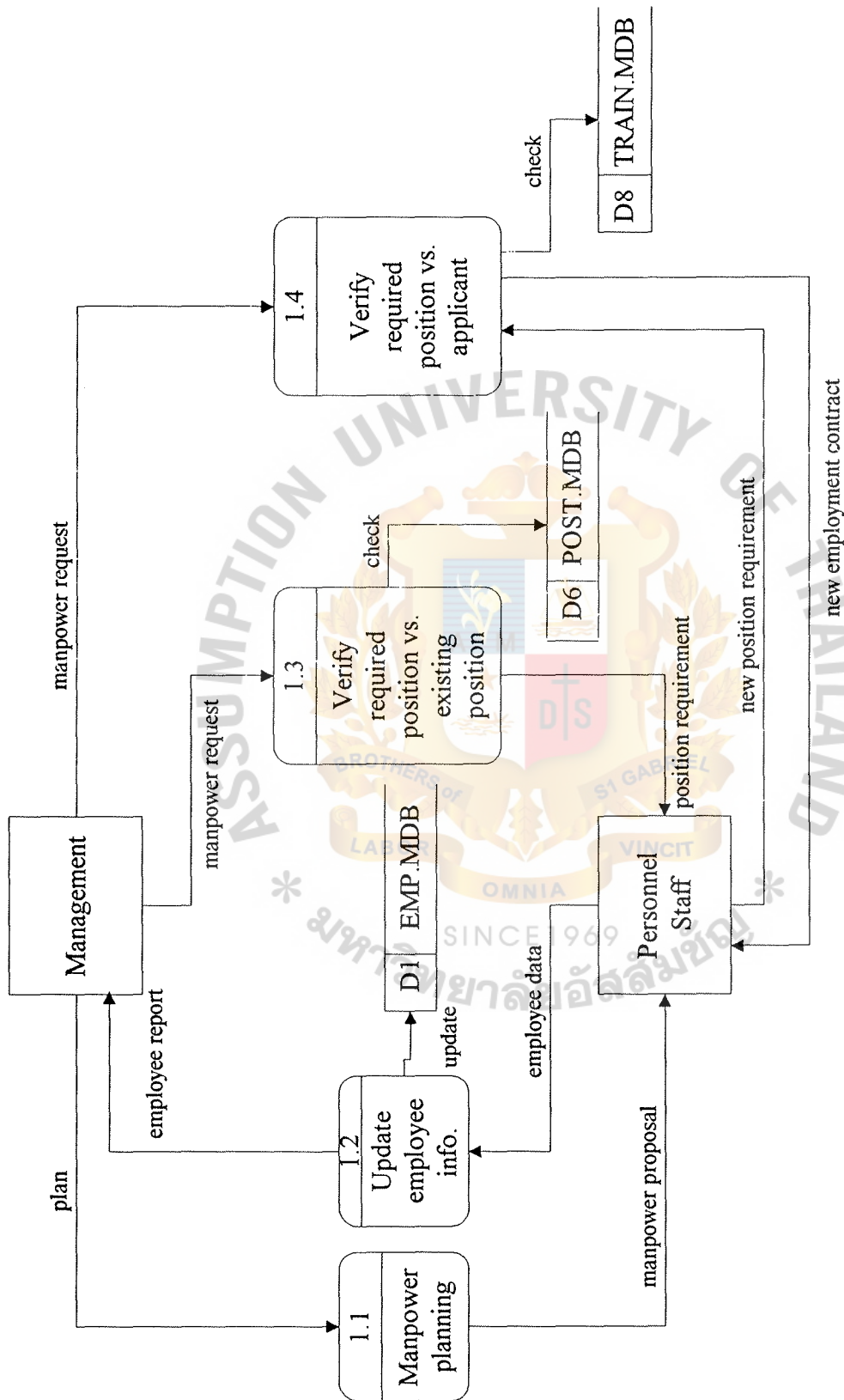
Figure A.5. Data Flow Diagram Level 1 of Proposed System Process 1 - Manpower Planning.
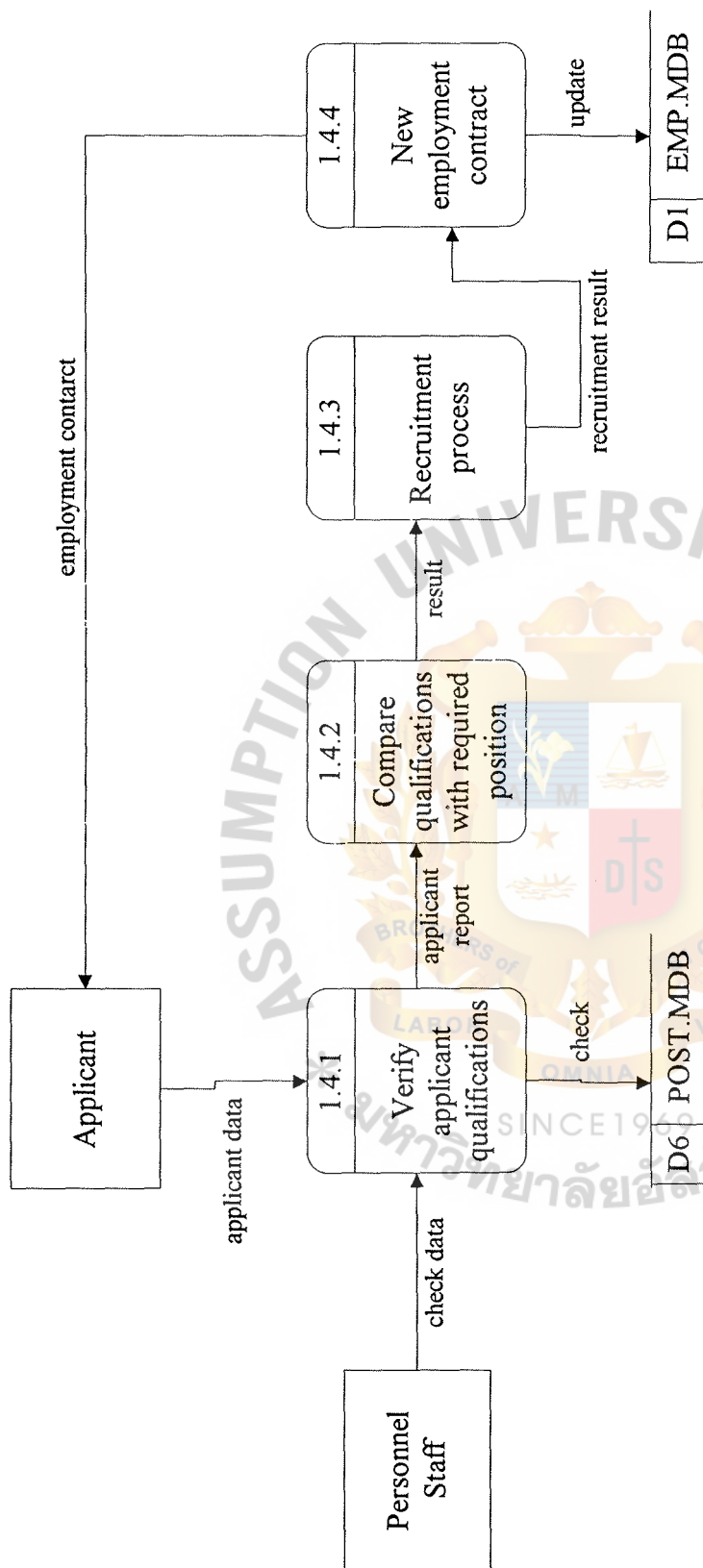
Figure A.6. Data Flow Diagram Level 2 of Proposed System Process 1 - Manpower Planning.

39
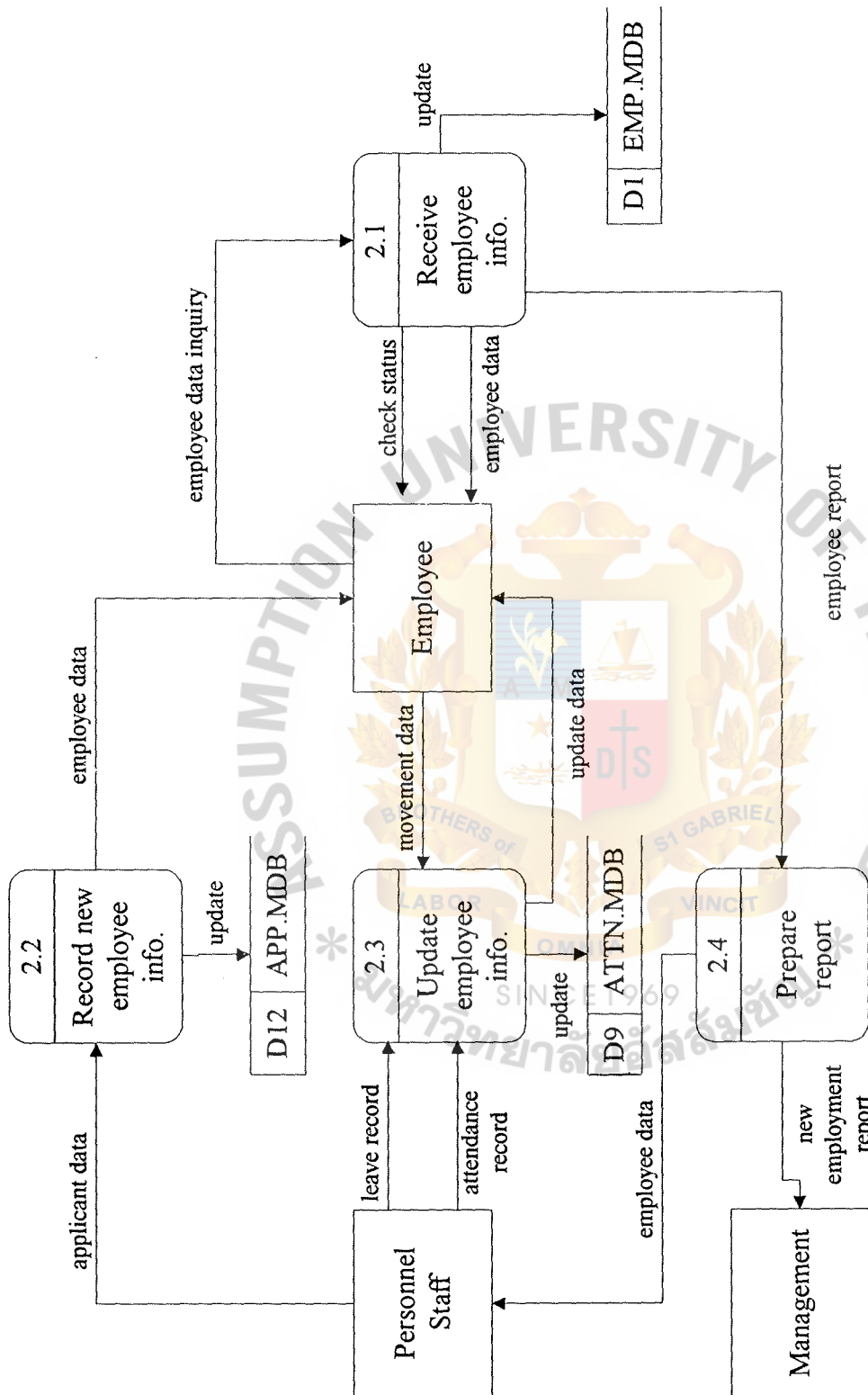
Figure A.7.   Data Flow Diagram Level 1 of Proposed System Process 2 - Maintain Employee Information.
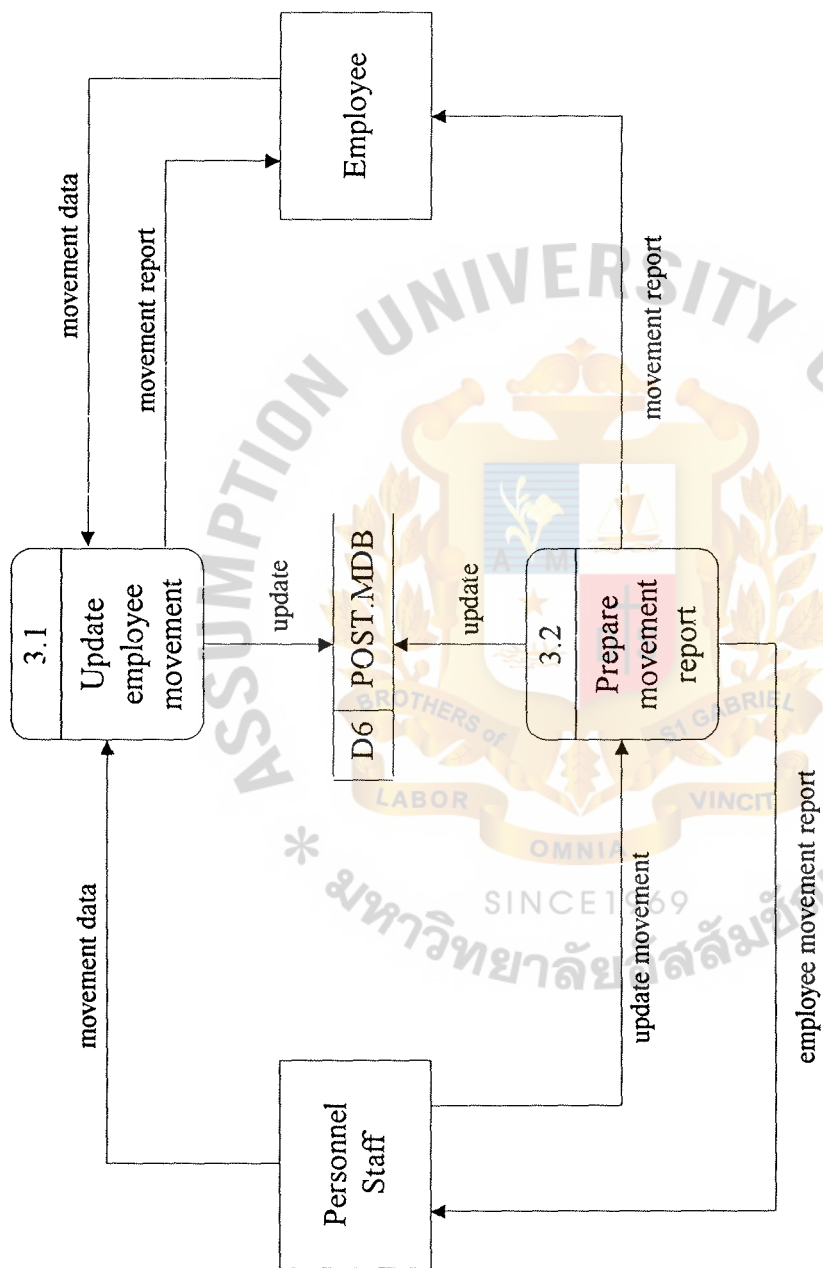
Figure A.8.   Data Flow Diagram Level 1 of Proposed System Process 3 - Update Employee Movement.

41
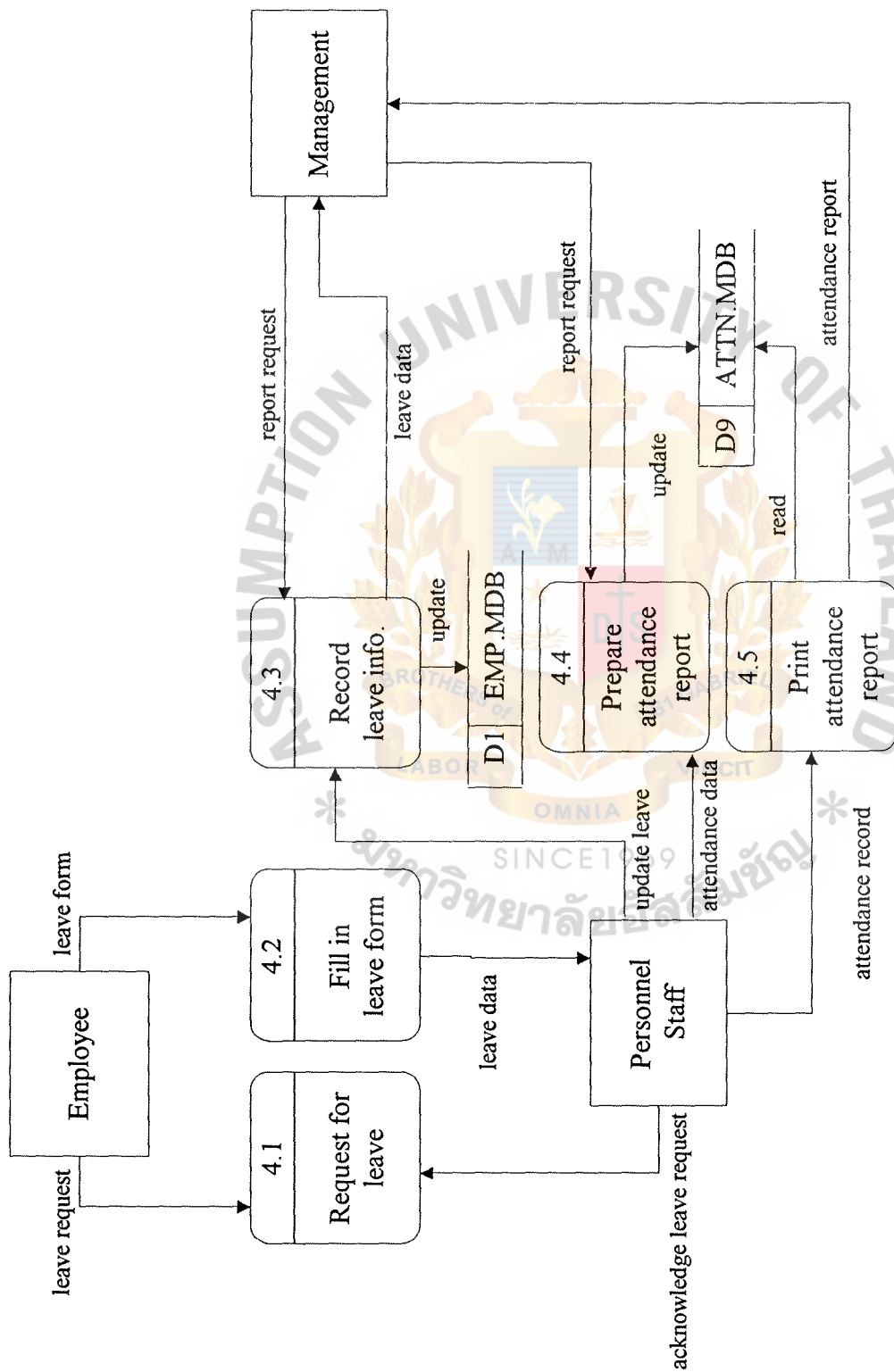
Figure A.9. Data Flow Diagram Level 1 of Proposed System Process 4 - Employee Leave Record.
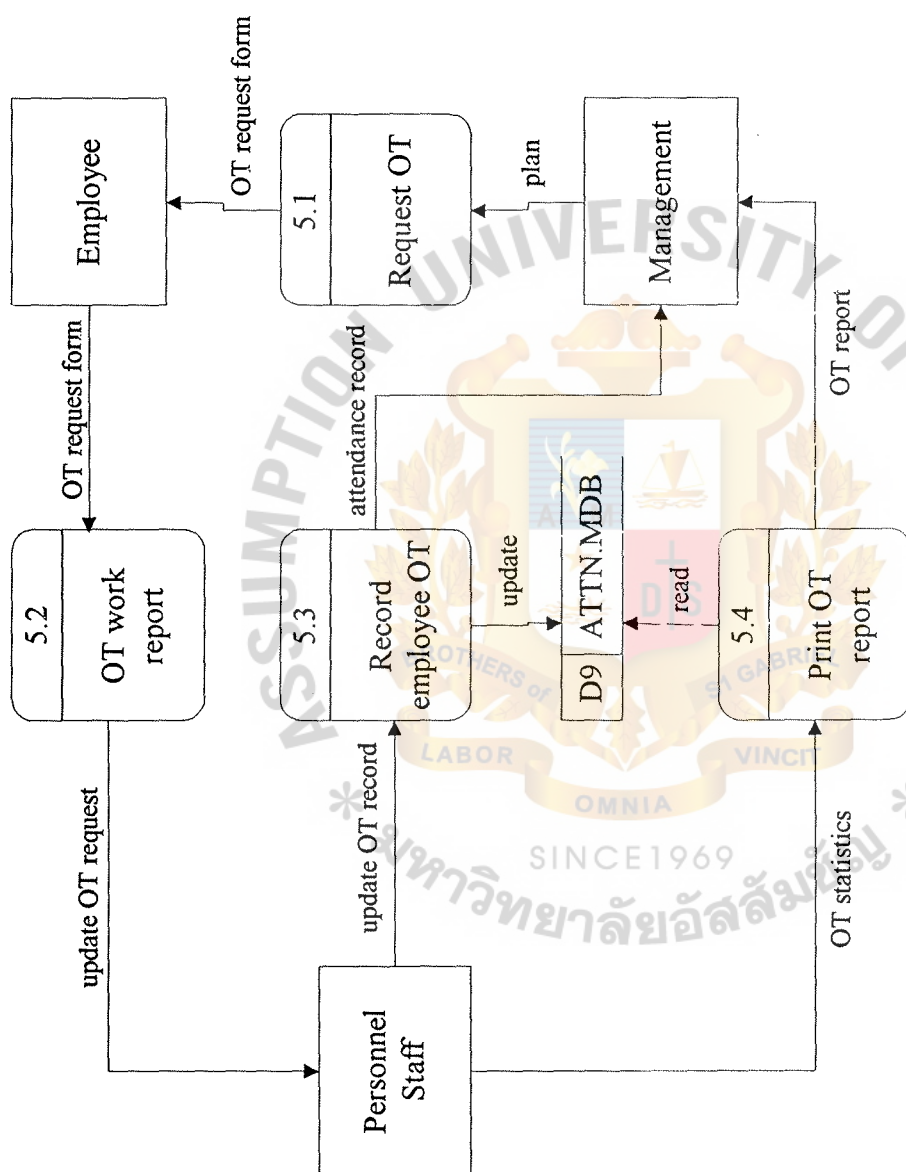
Figure A.10.   Data Flow Diagram Level 1 of Proposed System Process 5 - Over Time Record.

43
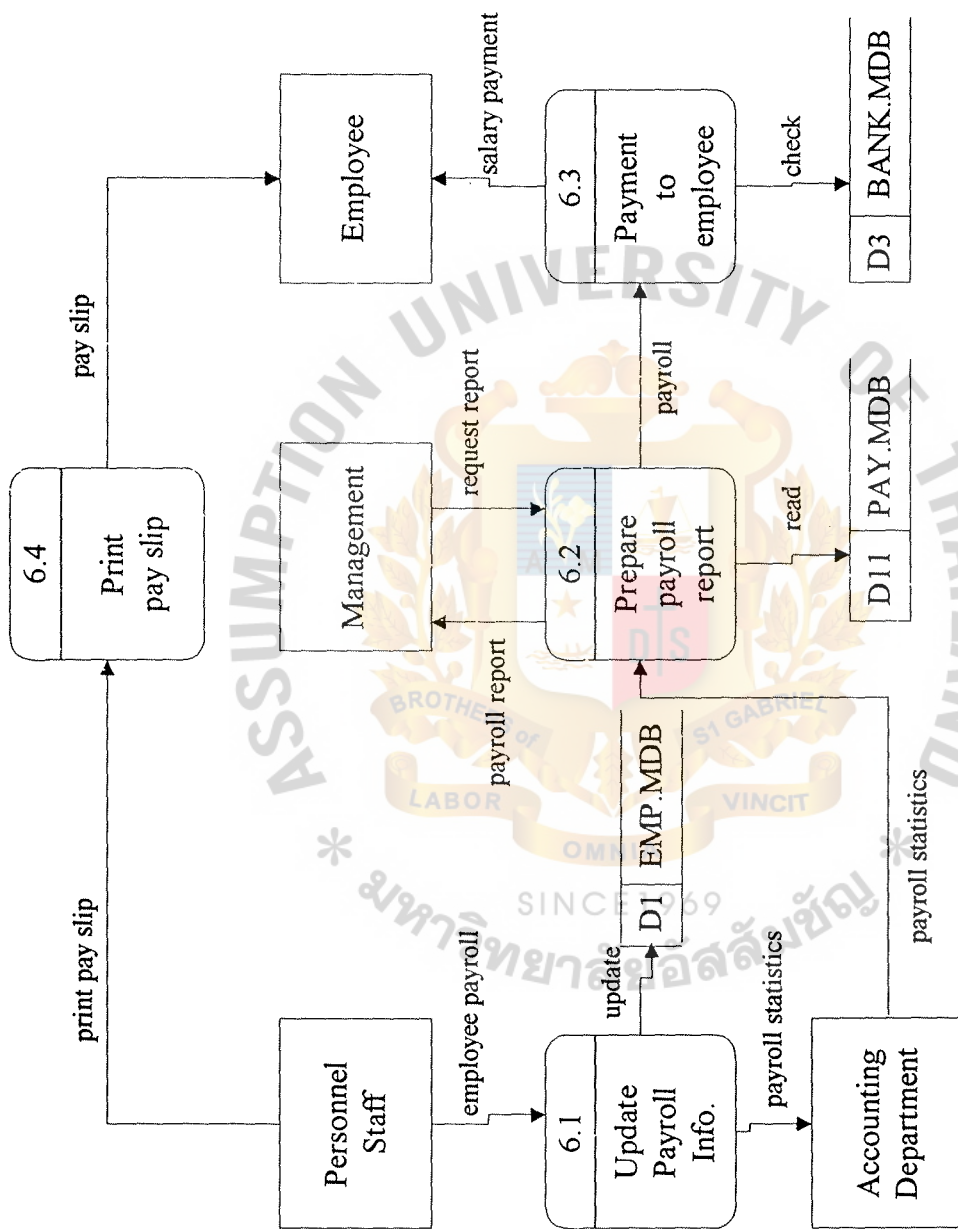
Figure A.11.   Data Flow Diagram Level 1 of Proposed System Process 6 - Payroll Record.

44
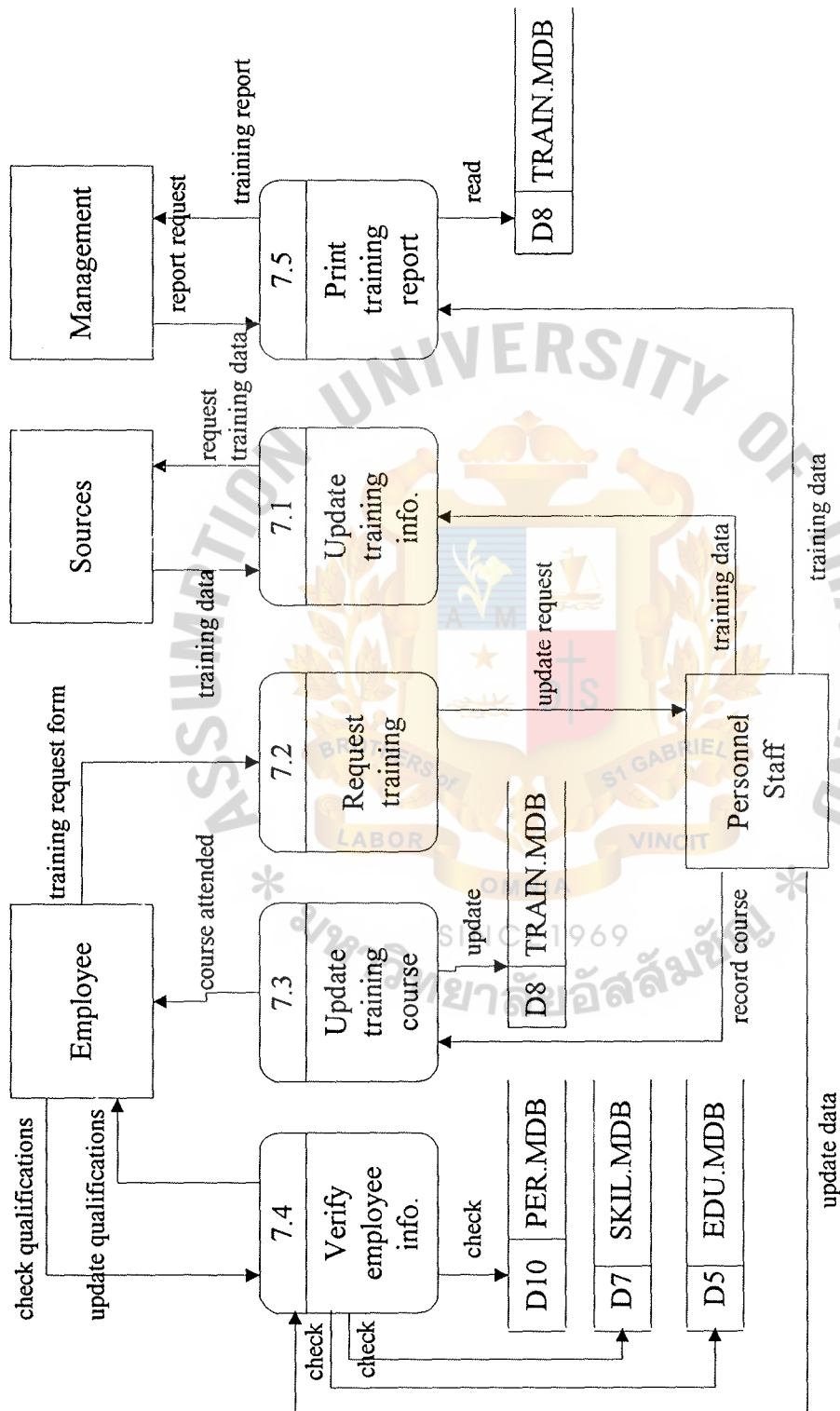
Figure A.12. Data Flow Diagram Level 1 of Proposed System Process 7 - Employee Training Record.

45
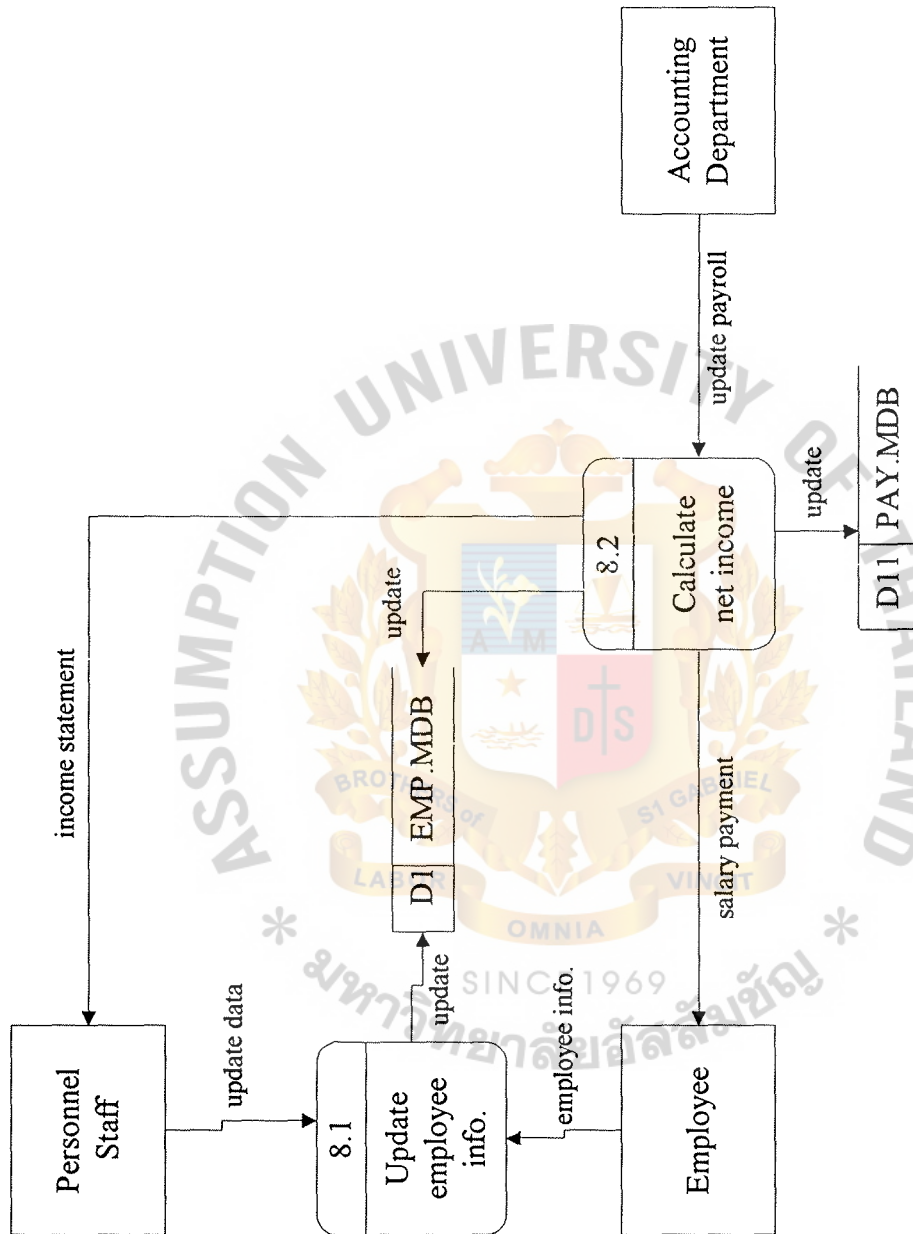
Figure A.13. Data Flow Diagram Level 1 of Proposed System Process 8 - Calculate Net Income.

46
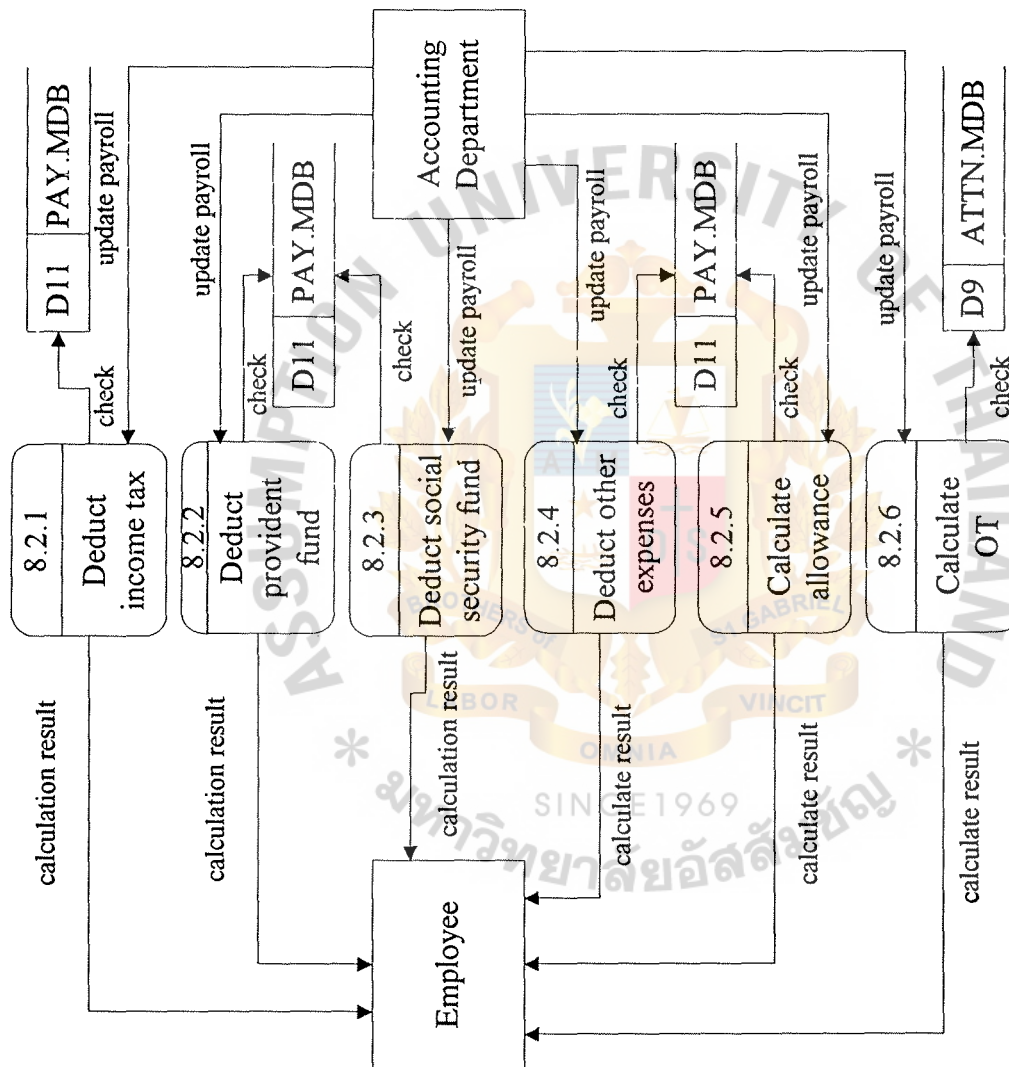
Figure A.14. Data Flow Diagram Level 2 of Proposed System Process 8 - Calculate Net Income.

47
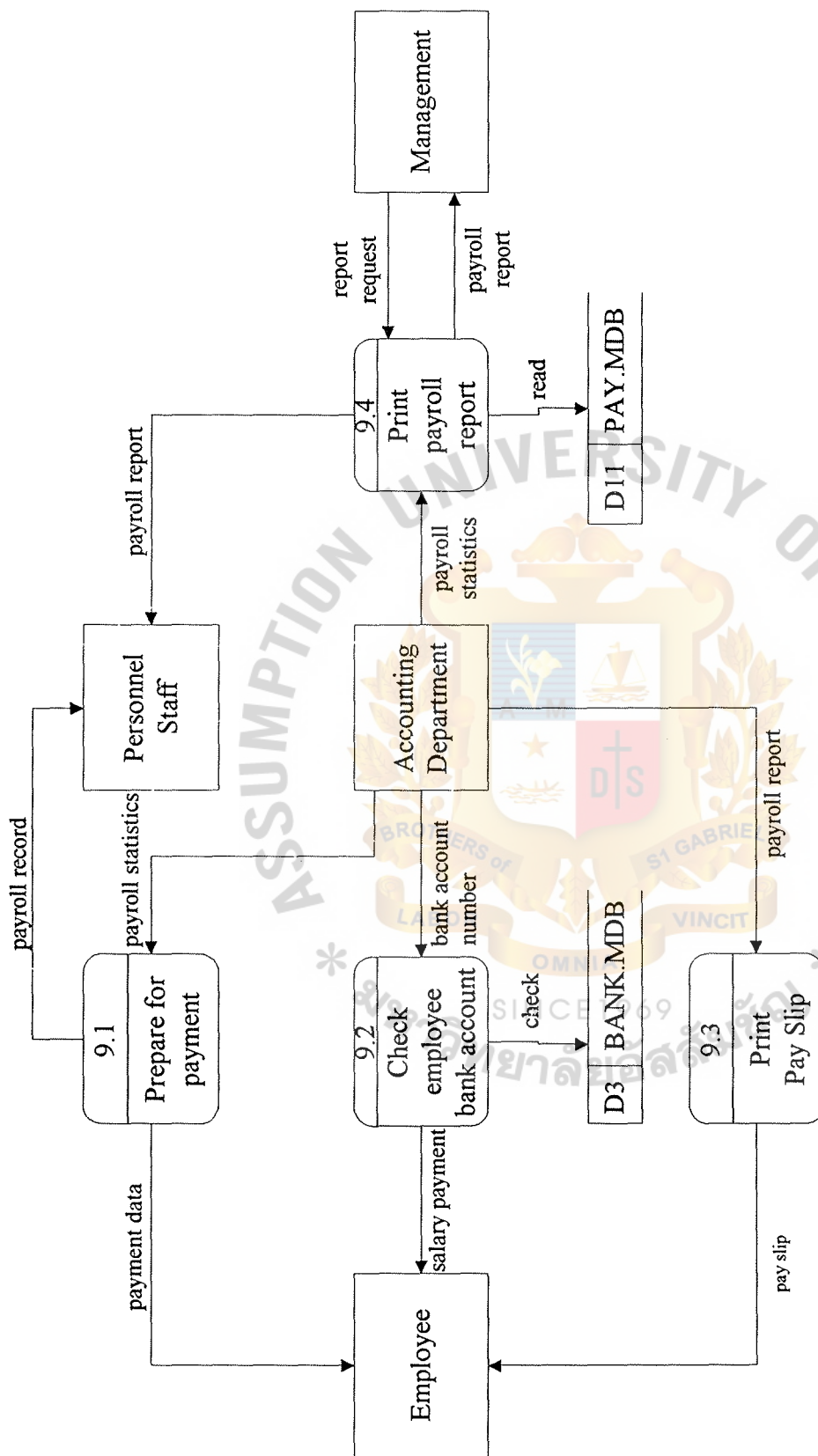
Figure A.15.   Data Flow Diagram Level 1 of Proposed System Process 9 - Salary Payment.

APPENDIX B

PROCESS SPECIFICATION

Table B.1. Process Specification of Process 1.

Process Name	Manpower Planning
Data In:	1. Employee information 2. Applicant information
Data Out:	1. Employee report 2. New employee information
Process:	1. Management plan for new employment. 2. Personnel staff update employee information. 3. Verify required position vs. existing position. 4. Verify required position vs. applicant qualifications. 5. Process for new employment. 6. Repeat step 4. Until satisfied.
Attachment:	1. Applicant 2. Data store D1, D6, and D12

Table B.2. Process Specification of Process 1.4.

Process Name	Verify required position vs. applicant qualifications
Data In:	1. Applicant information 2. Position required
Data Out:	New employment contract
Process:	1. Personnel staff verify applicant qualifications. 2. Compare qualifications with required position. 3. If satisfied, arrange recruitment process. 4. Make new employment contract. 5. If not satisfied, repeat step 2 until get the right person.
Attachment:	1. Applicant 2. Data Store D12

Table B.3.   Process Specification of Process 2.

Process Name	Maintain Employee Information
Data In:	Employee personal information
Data Out:	1. Employee information report 2. Employee ttendance report
Process:	1. Personnel staff receives employee information. 2. Record new employee information into the system. 3. Update existing employee information into the system. 4. Repeat step 2 until finish all information changes. 5. Request system to print out summary report of employee personal information and send to the management.
Attachment:	1. Employee 2. Data Store D1, D9, and D12

Table B.4.   Process Specification of Process 3.

Process Name	Update Employee Movement
Data In:	1. Employee position code and description 2. Ended salary from previous company 3. Date of employment status changed 4. Previous company information
Data Out:	1. Employee movement information 2. Employee employment history
Process:	1. Personnel staff receives employee movement information from various Dept. 2. Update employee movement into the system. 3. Repeat step 2 until finish all movement changes. 4. Request system to print out summary report of employee movement.
Attachment:	1. Employee 2. Department 3. Data Store D6

Table B.5.   Process Specification of Process 4.

Process Name	Employee Leave Record
Data In:	1. Leave application information 2. Employee code and full name
Data Out:	1. Employee attendance record
Process:	1. Employee request for leave by filling in leave form. 2. Submit leave application form to personnel staff. 3. Personnel staff record employee leave request into the system. 4. Request system to print out summary report of employee attendance. 5. Repeat step 3 until finish all leave request, then do step 4.
Attachment:	1. Employee 2. Management 3. Data Store D1 and D9

Table B.6.   Process Specification of Process 5.

Process Name	OT Record
Data In:	1. OT request information 2. Employee OT 3. Number hour(s) request
Data Out:	Overtime record
Process:	1. Management request OT work. 2. Employee reports for OT work. 3. Personnel staff record OT work into the system. 4. Request system to print out summary report of employee attendance.
Attachment:	1. Employee 2. Management 3. Data Store D9

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Table B.7.   Process Specification of Process 6.

Process Name	Payroll Record
Data In:	1. Employee code 2. Number of OT hour(s) done 3. Bank name and account number 4. Payment date
Data Out:	1. Payroll record 2. Pay slip
Process:	1. Personnel staff updates payroll information for Accounting. 2. Accounting prepares payroll report for the management. 3. Make salary payment to employee. 4. Personnel staff request the system to print pay slip and distribute to employee.
Attachment:	1. Employee 2. Accounting Dept. 3. Data Store D3, D9, and D11

Table B.8.   Process Specification of Process 7.

Process Name	Employee Training Record
Data In:	1. Employee code 2. Training type, course name, training company, training date, cost, and total hour(s)
Data Out:	1. Employee training record
Process:	1. Receives training information from sources. 2. Update training information and schedule. 3. Employee request for training. 4. Verify employee qualifications. 5. Personnel staff update approved training request into the system. 6. System print out training record of each employee.
Attachment:	1. Employee 2. Management 3. Sources 4. Data Store D5, D7, D8, and D10

Table B.9.   Process Specification of Process 8.

Process Name	Calculate Net Income
Data In:	1. Employee code 2. Employee salary, allowances, and deductions
Data Out:	1. Net income statement
Process:	1. Personnel staff update employee information. 2. System calculates net income of each employee. and provident fund base on employee salary. 3. System print calculation result (Net income statement). 4. Arrange salary payment to employee.
Attachment:	1. Accounting Dept. 2. Data Store D1 and D11

Table B.10.   Process Specification of Process 8.2.

Process Name	Calculate Net Income
Data In:	1. Employee code 2. Employee salary, allowances, and deductions
Data Out:	1. Net income statement
Process:	1. System calculates income tax, provident fund, social security fund, base on employee salary. 2. System deduct all expenses to the base salary. 3. System print calculation result (Net income statement). 4. Arrange salary payment to employee.
Attachment:	1. Accounting Dept. 2. Data Store D9

Table B.11.   Process Specification of Process 9.

Process Name	Salary Payment to Employee
Data In:	1. Employee code 2. Employee bank database
Data Out:	1. Pay In Slip 2. Payroll report
Process:	1. At month-end, Accounting Dept. prepare net income statement and prepare for salary payment. 2. Checks employee bank name and account number. 3. Payment to employee account on day 27 of each month. 4. System print pay slip to employee.
Attachment:	1. Accounting Dept. 2. Data Store D3 and D11

APPENDIX   C

DATABASE DESIGN, ENTITY RELATIONSHIP DIAGRAM
OF PROPOSED SYSTEM
AND STRUCTURE DESIGN/STRUCTURE CHARTS

Personal Administration Database

1. Employee Database

File name: EMP.MDB

Table C.1.   Employee Personal Information Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to	Check	Key Type
1	EMP_CODE	N(5)	Y	Y				PK
2	EMP_FNAME	C(20)						Attribute
3	EMP_LNAME	C(20)						Attribute
4	POST_CODE	N(2)			Y			FK
5	DEPT_CODE	N(3)	Y			Employee Movement	TM, TH, PM	FK
6	EMP_ST	C(2)	Y					Attribute
7	J_DATE	D(10)					> 1-Jan-1991	Attribute
8	L_DATE	D(10)			Y		> 1-Jan-1991	Attribute
9	TAX_NO	N(10)						Attribute
10	SSN	N(10)						Attribute
11	B_NAME	C(3)	Y			Bank		FK
12	GEN	C(2)			Y		M or F	Attribute
13	DOB	D(10)						Attribute
14	MAR_ST	C(1)			Y		S, M, or D	Attribute
15	ADD_1	C(20)						Attribute
16	ADD_2	C(20)			Y			Attribute
17	PROVINCE	C(15)						Attribute
18	ZIP_CODE	N(5)			Y			Attribute
19	TEL_NO	N(10)			Y			Attribute
20	INS_CODE	N(2)	Y			Institute		FK
21	ED_CODE	N(2)	Y			Education		FK

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2. Department Database

File name: DEPT.MDB

Table C.2.   Department Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	DEPT_CODE	N(3)	Y					PK
2	DEPT_DES	C(20)						Attribute
3	HOD	C(25)			Y			Attribute
4	POST_CODE	N(2)				Employee Movement		FK

3. Bank Database

File name: BANK.MDB

Table C.3.   Bank Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	B_NAME	C(3)	Y	Y		Employee Personal Info.		PK
2	ACCT_NO	N(14)						Attribute
3	B_ADD_1	C(20)						Attribute
4	B_ADD_2	C(20)			Y			Attribute
5	B_PROVINCE	C(15)						Attribute
6	B_ZIP_CODE	N(5)			Y			Attribute
7	B_TEL_NO	N(10)			Y			Attribute
8	B_FAX_NO	N(10)			Y			Attribute

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4. Institute Database

File name: INS.MDB

Table C.4. Institute Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	INS_CODE	N(2)	Y	Y		Employee Personal Info.		PK
2	INS_NAME	C(20)	Y	Y				Attribute
3	INS_ADD_1	C(20)			Y			Attribute
4	INS_ADD_2	C(20)			Y			Attribute
5	INS_PROVINCE	C(15)			Y			Attribute
6	INS_ZIP_CODE	N(5)			Y			Attribute
7	INS_TEL_NO	N(10)			Y			Attribute
8	EDU_CODE	N(2)	Y			Education		FK

5. Education Database

File name: EDU.MDB

Table C.5. Employee Education Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	EDU_CODE	N(2)	Y	Y		Institute		PK
2	MAJ_SUB	C(15)			Y			Attribute
3	ED_YEAR	N(4)			Y			Attribute
4	GPA	N(4)			Y		Between 2.00 to 4.00	Attribute

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6. Employee Movement Database

File name: POST.MDB

Table C.6.   Employee Movement Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	POST_CODE	N(2)	Y	Y				PK
2	POST_DES	C(20)	Y	Y				Attribute
3	P_POST	C(20)			Y			Attribute
4	P_COMP	C(20)			Y			Attribute
5	D_CHANGE	D(10)			Y		> 1 Jan 1999	Attribute
6	E_SAL	N(10)					Between 3999.99 to99,999.99	Attribute
7	EMP_CODE	N(5)	Y		Y	Applicant		FK

7. Employee Skill Database

File name: SKIL.MDB

Table C.7.   Employee Skill Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	EMP_CODE	N(5)	Y	Y				PK
2	E_L_LEVEL	C(1)			Y		E, G, F, B	Attribute
3	OTH_L_LEVEL	C(1)			Y		E, G, F, B	Attribute
4	COMP_SKIL	C(1)			Y		E, G, F, B	Attribute
5	TYPE_SKIL	C(1)			Y		E, G, F, B	Attribute

8. Employee Training Database

File name: TRAIN.MDB

Table C.8.   Employee Training Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	EMP CODE	N(5)	Y	Y				PK
2	T TYPE	C(1)					I, E	Attribute
3	TC NAME	C(20)						Attribute
4	T COMP	C(20)			Y			Attribute
5	T DATE	D(10)			Y		>1-Jan-1991	Attribute
6	T COST	N(7)			Y		Between 0 to 4,999.99	Attribute
7	TT HR	N(4)			Y		Between 0 to 79.99	Attribute

9. Employee Attendance Database

File name: ATTN.MDB

Table C.9.   Employee Attendance Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	EMP CODE	N(5)	Y	Y				PK
2	L TYPE	C(1)					S, V, H, B	Attribute
3	U DATE	N(2)			Y		Between 0 to 27	Attribute
4	B DATE	N(2)			Y		Between 0 to 27	Attribute
5	OT HR	N(4)			Y		Between 0 to 15	Attribute

10. Employee Performance Database

File name: PER.MDB

Table C.10.   Employee Performance Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	EMP_CODE	N(5)	Y	Y				PK
2	C_SAL	N(10)					Between 3,999.99 to 99,999.99	Attribute
3	P_SAL	N(10)					Between 3,999.99 to 99,999.99	Attribute
4	%_ADJUSTED	N(4)			Y		Between 0 to 5	Attribute
5	ADJ_DATE	D(10)					>1-Jan-1991	Attribute
6	PER_LEVEL	C(1)					E, G, F, B	Attribute
7	EVA_DATE	D(10)					>1-Jan-1991	Attribute

11. Employee Payroll Database

File name: PAY.MDB

Table C.11.   Employee Payroll Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	EMP CODE	N(5)	Y	Y				PK
2	C_SAL	N(10)					Between 3,999.99 to 99,999.99	Attribute
3	TAX DEC	N(7)					Between 399.99 to 9,999.99	Attribute
4	SSN DEC	N(7)					Between 199.99 to 4,999.99	Attribute
5	PF DEC	N(7)					Between 199.99 to 4,999.99	Attribute
6	OTH DEC	N(7)			Y		Between 199.99 to 4,999.99	Attribute
7	NET PAY	N(10)					Between 3,999.99 to 99,999.99	Attribute
8	P DATE	D(10)					>1-Jan-1991	Attribute
9	B NAME	C(3)	Y	Y		Bank		FK

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12. Applicant Database

File name: APP.MDB

Table C.12.   Applicant Table.

Field No.	Field Name	Field Type	Index	Unique	Nullable	Foreign Key to Table	Check	Key Type
1	APP_NO	N(3)	Y	Y				PK
2	APP_FNAME	C(20)						Attribute
3	APP_LNAME	C(20)						Attribute
4	APP_ADD_1	C(25)			Y			Attribute
5	APP_ADD_2	C(25)			Y			Attribute
6	APP_PROVINCE	C(20)			Y			Attribute
7	APP_ZIP_CODE	N(5)			Y			Attribute
8	APP_TEL	N(7)						Attribute
9	POST_CODE	N(2)	Y	Y		Employee Movement		FK
10	APP_DATE	D(10)					>1-Jan-1991	Attribute
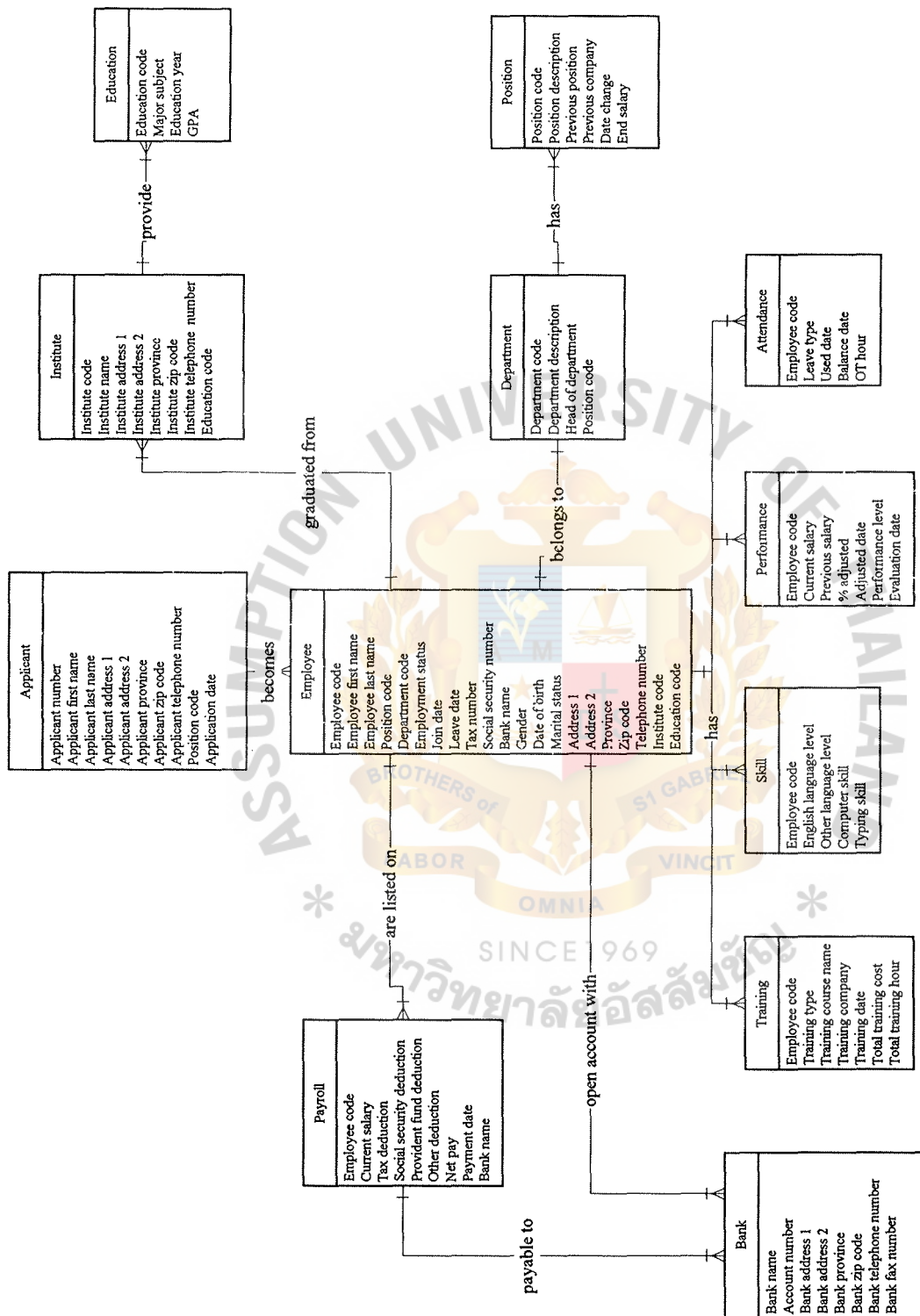
Figure C.1. Entity Relationship Diagram of the Proposed System.
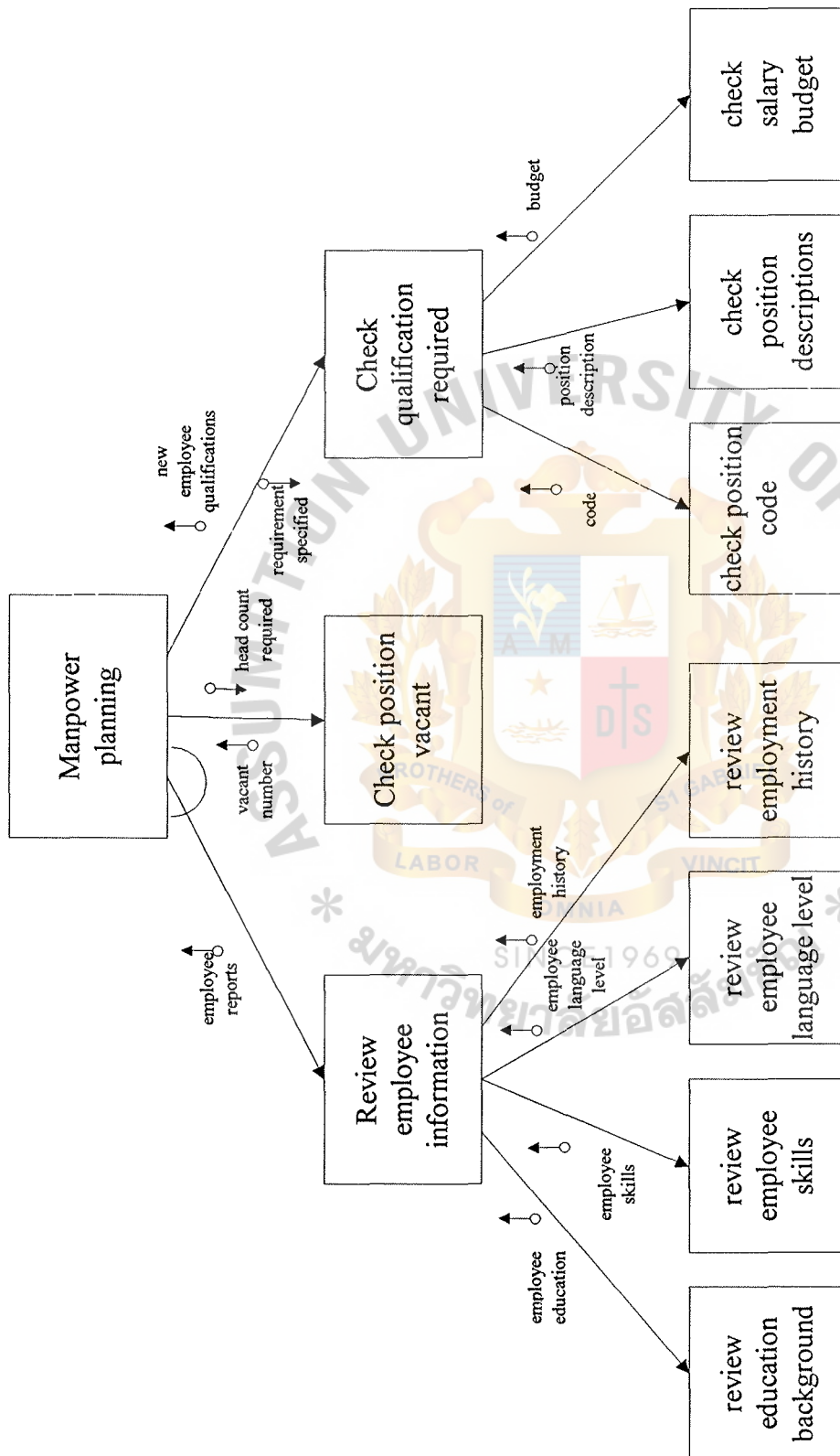
Figure C.2.   Structure Chart of Manpower Planning System.
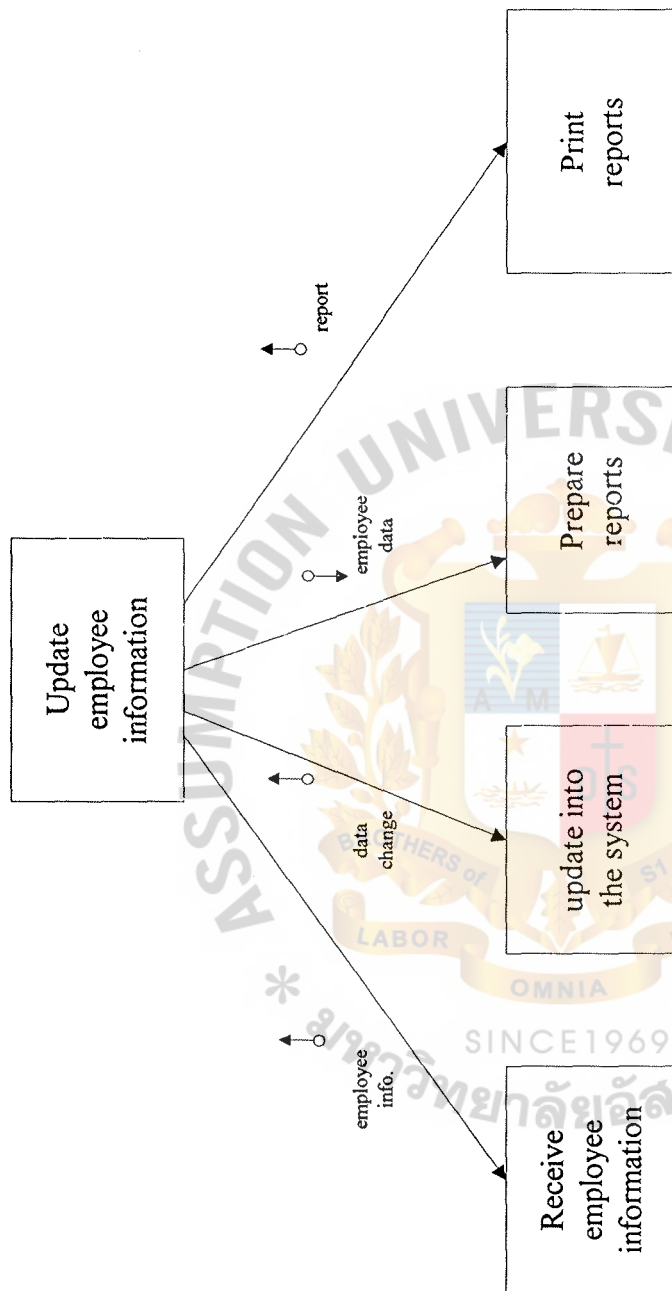
Figure C.3. Structure Chart of Updating Employee Information System.
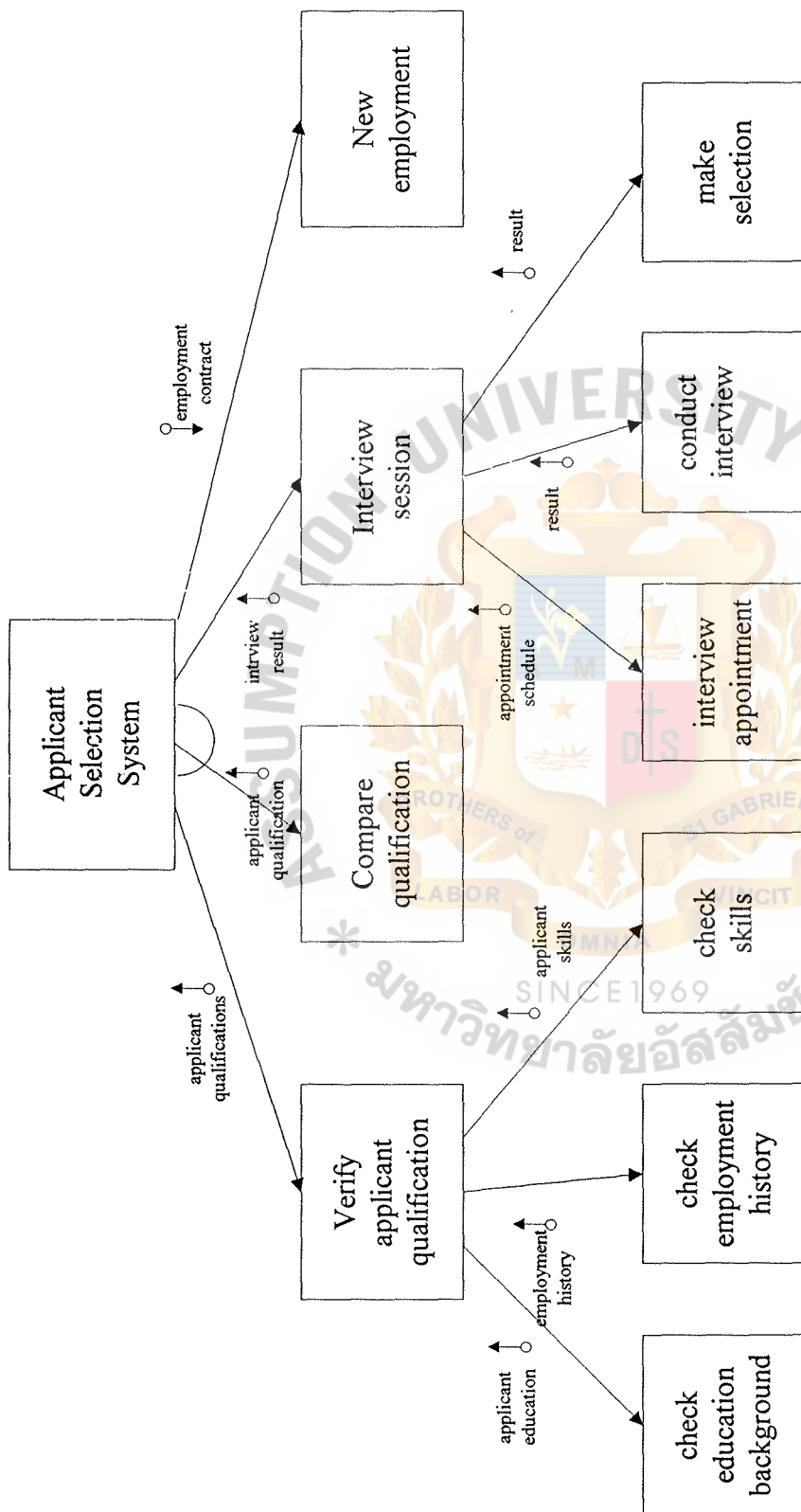
Figure C.4.   Structure Chart of Applicant Selection System.
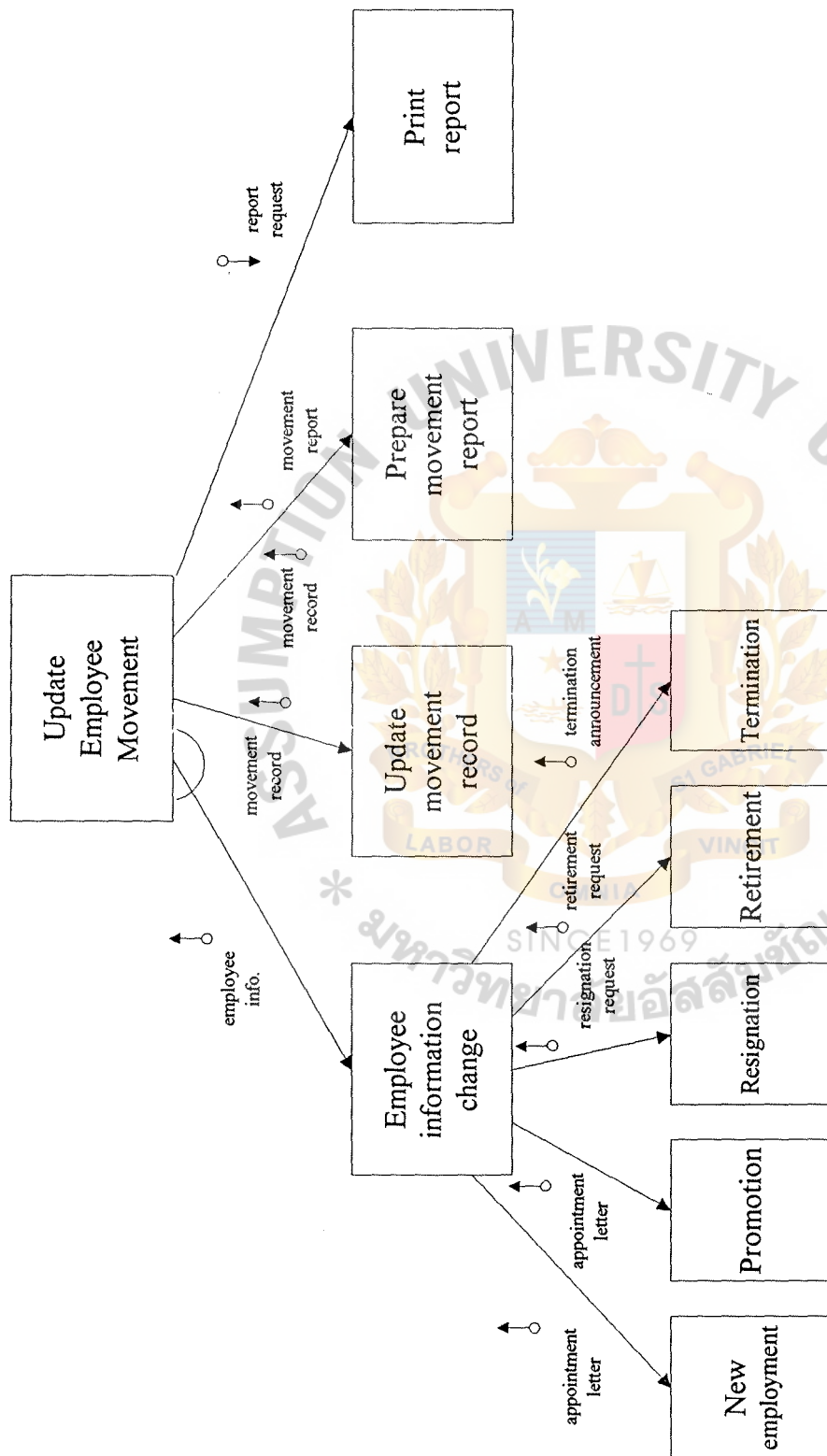
Figure C.5.   Structure Chart of Employee Movement Update.
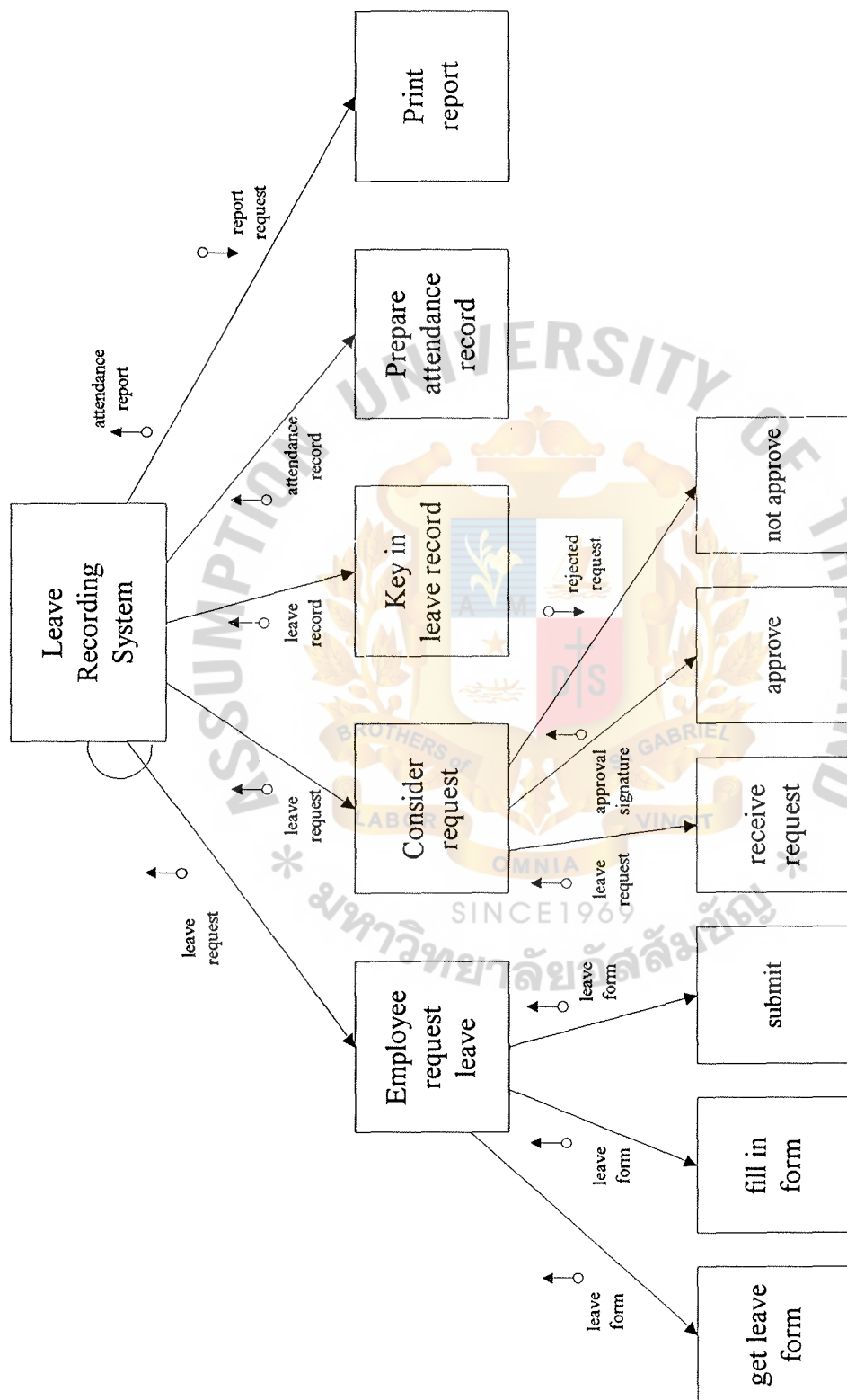
Figure C.6.   Structure Chart of Leave Recording System.
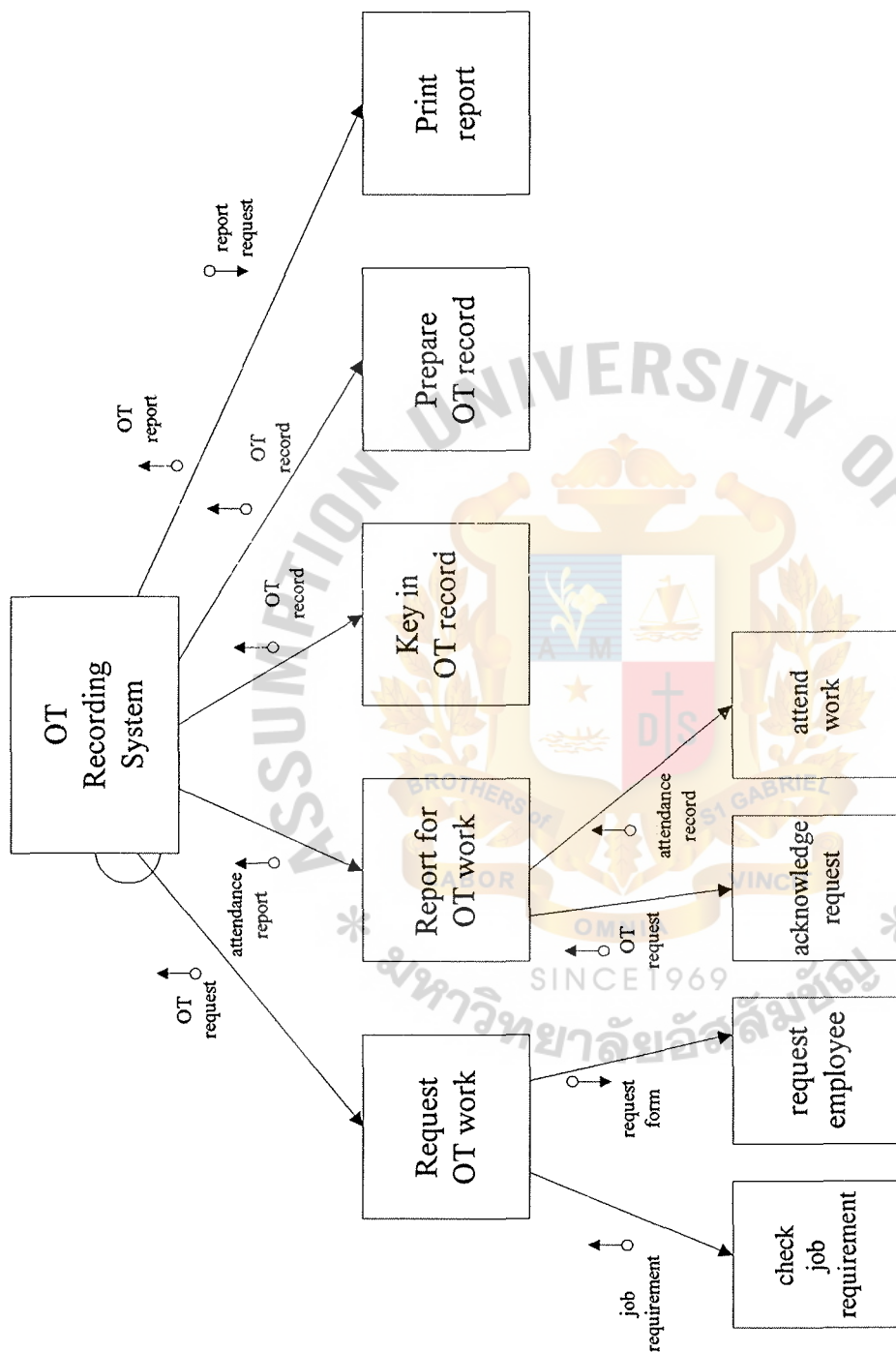
Figure C.7. Structure Chart of OT Recording System.

69
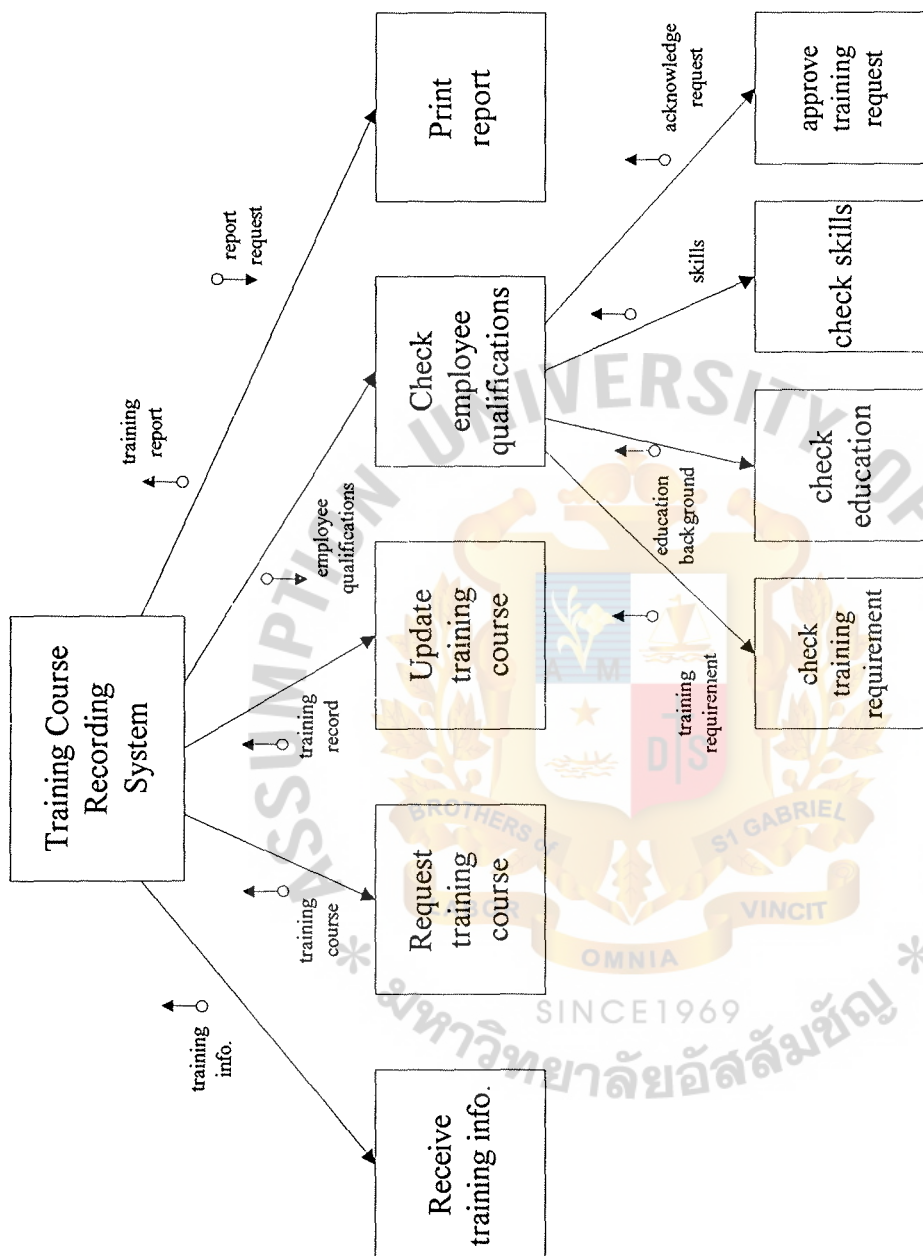
Figure C.8. Structure Chart of Training Course Recording System.
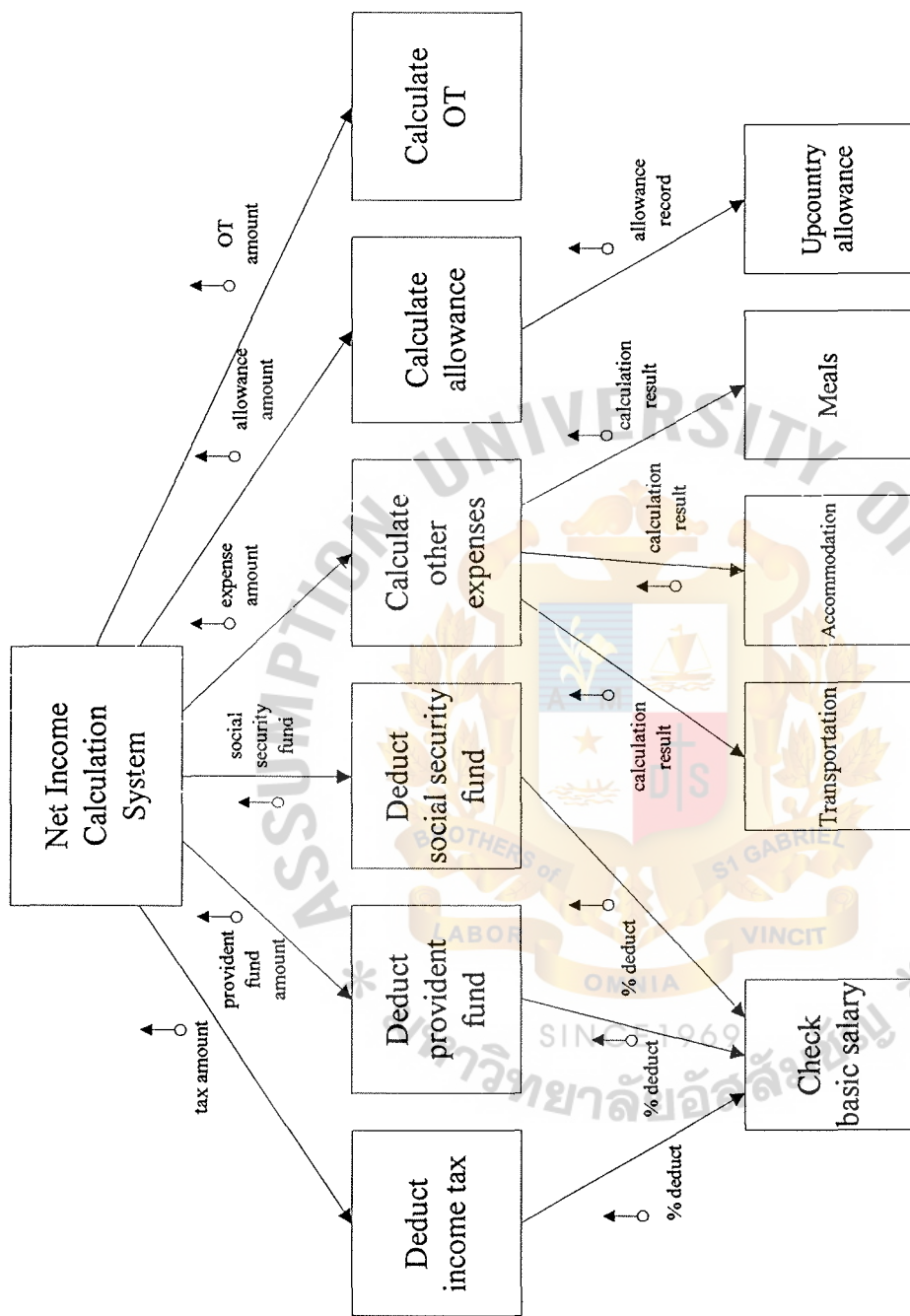
Figure C.9. Structure Chart of Net Income Calculation System.

71
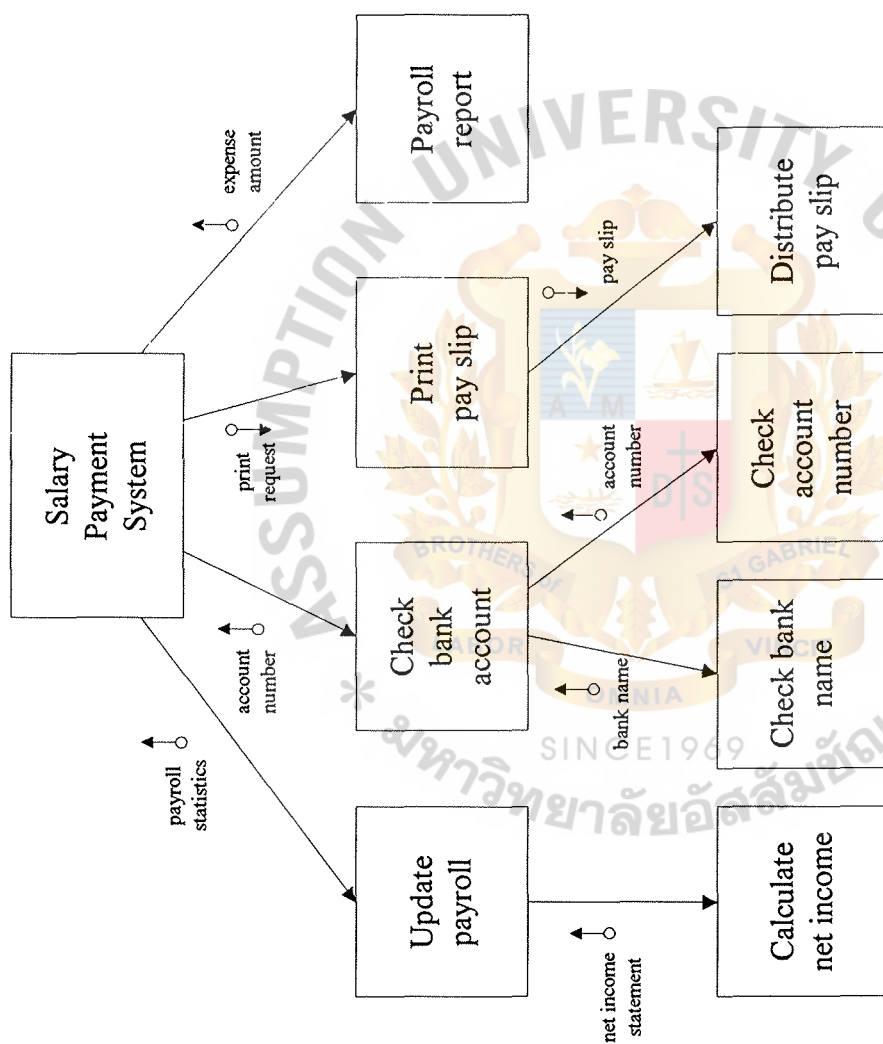
Figure C.10. Structure Chart of Salary Payment System.

APPENDIX   D

DATA DICTIONARY

Table D.1.   Data Dictionary of Employee Table.

Data Name	Description
ADD_1	Employee permanent address 1
ADD_2	Additional employee permanent address 2
B_NAME	Employee name
DEPT_CODE	Employee department code
DOB	Employee date, month, and year of birth
ED_CODE	Employee education code
EMP_CODE	Employee personal code
EMP_FNAME	Employee first name
EMP_LNAME	Employee last name
EMP_ST	Employment status of employee TM = Monthly temporary TD = Daily temporary TH = Hourly temporary PM = Permanent employment
GEN	Gender of employee M = Male F = Female
INS_CODE	Employee Institution code
J_DATE	Employee first day of work (dd/mm/yyyy)
L_DATE	Employee last day of work (dd/mm/yyyy)
MAR_ST	Marital status of employee S = Single M = Married D = Divorce
POST_CODE	Employee position code
PROVINCE	Province of employee
SSN	Employee social security number
TAX_NO	Employee tax number
TEL_NO	Employee telephone number
ZIP CODE	Zip code of employee

Table D.2.   Data Dictionary of Department Table.

Data Name	Description
DEPT_CODE	Employee department code
DEPT_DES	Department description/details
HOD	Section head of each department
POST_CODE	Employee position code

Table D.3.   Data Dictionary of Bank Table.

Data Name	Description
ACCT_NO	Employee bank account number
B_ADD_1	Bank current address 1
B_ADD_2	Additional bank current address 2
B_FAX_NO	Bank fax number
B_NAME	Bank full name BKK = Bangkok Bank Public Co., Ltd. TFB = Thai Farmers Bank Public Co., Ltd.
B_PROVINCE	Province of bank
B_TEL_NO	Bank telephone number
B_ZIP_CODE	Zip code of bank

Table D.4.   Data Dictionary of Institute Table.

Data Name	Description
ED_CODE	Employee education code
INS_ADD_1	Employee institution address 1
INS_ADD_2	Additional employee institution address 2
INS_CODE	Employee institution code
INS_NAME	Institution full name/details
INS_PROVINCE	Province of institution
INS_TEL_NO	Institution telephone number
INS_ZIP_CODE	Zip code of institution

Table D.5.   Data Dictionary of Education Table.

Data Name	Description
ED_CODE	Employee education code
ED_YEAR	Completed year of education of each employee
GPA	Employee completed grade point average
MAJ_SUB	Employee major subject studied

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Table D.6.   Data Dictionary of Employee Movement ,Table.

Data Name	Description
D_CHANGE	Effective date of employee promotion
E_SAL	Last salary rate prior to employee promotion
EMP_CODE	Employee code
P_COMP	Previous company of employee before joining with PQCT
P_POST	Previous position of employee before joining with PQCT
POST_CODE	Employee position code
POST_DES	Employee position description

Table D.7.   Data Dictionary of Employee Skill Table.

Data Name	Description
COMP_SKIL	Computer skill of each employee W = Window E = Excel P = Power Point A = Access
EMP_CODE	Employee Code
ENG_L_LEVEL	English language level of each employee E = Excellent (80 -100) G = Good (70 - 79) F = Fair (50 – 69) B = Below average (Below 50)
OTH_L_LEVEL	Other language level of each employee E = Excellent (80 -100) G = Good (70 - 79) F = Fair (50 – 69) B = Below average (Below 50)
TYPE_SKIL	Typing skill of each employee E = Excellent (80 -100) G = Good (70 - 79) F = Fair (50 – 69) B = Below average (Below 50)

Table D.8.   Data Dictionary of Employee Training Table.

Data Name	Description
EMP_CODE	Employee code
T_COMP	Training company
T_COST	Training cost of each employee
T_DATE	Training date of each employee
T_TYPE	Training type of each employee I = Internal training E = External training
TC_NAME	Training course name attended
TT_HR	Total training hour(s) of each employee

Table D.9.   Data Dictionary of Employee Attendance Table.

Data Name	Description
B_DATE	Balance date of employee leave
EMP_CODE	Employee code
L_TYPE	Leave type S = Sick V = Annual vacation H = Holiday B = Business leave
OT_HR	Over time hour(s) of each employee
U_DATE	Used date of employee leave

Table D.10.   Data Dictionary of Employee Performance Table.

Data Name	Description
% ADJUSTED	Annual salary adjusted in percentage
ADJ_DATE	Salary adjusted date
C_SAL	Current salary of each employee
EMP_CODE	Employee code
EVA_DATE	Employee evaluation date
P_SAL	Employee previous salary before each annual adjustment
PER_LEVEL	Employee performance level E = Excellent (80 -100) G = Good (70 - 79) F = Fair (50 – 69) B = Below average (Below 50)

Table D.11. , Data Dictionary of Employee Payroll Table.

Data Name	Description
B_NAME	Bank name of each employee
C_SAL	Employee current salary
EMP_CODE	Employee code
NET_PAY	Net salary payment to each employee
OTH_DEC	Other deductions or expenses of each employee
P_DATE	Pay date for salary
PF_DEC	Employee provident fund deduction
SSN_DEC	Employee social security fund deduction
TAX_DEC	Employee income tax deduction

Table D.12.   Data Dictionary of Applicant Table.

Data Name	Description
APP_ADD_1	Applicant permanent address 1
APP_ADD_2	Additional applicant permanent address 2
APP_DATE	Date of application
APP_FNAME	Applicant first name
APP_LNAME	Applicant last name
APP_NO	Applicant number
APP_PROVINCE	Province of applicant
APP_TEL	Applicant telephone number
APP_ZIP_CODE	Zip code of applicant
POST_CODE	Position code applied

APPENDIX E

INPUT FORM

PQ Chemicals (Thailand) Ltd.
an affiliate of The PQ Corporation
บริษัท พี่คิว เคมิคอลส์ (ประเทศไทย) จำกัด
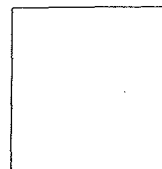
<u>คำแนะนำ</u> โปรดกรอกข้อความให้ละเอียดครบถ้วน

<u>เอกสารประกอบในสมัคร</u>
1. รูปถ่าย 2 นิ้ว 1 รูป
2. สำเนาทะเบียนบ้าน
3. สำเนาบัตรประชาชน
4. สำเนาหลักฐานการศึกษา
5. สำเนาหลักฐานการเกณฑ์ทหาร
6. หนังสือรับรองการผ่านงาน

ต้องการสมัครงานในตำแหน่ง _____ เงินเดือนที่ต้องการ _____ บาท
วันที่เขียนใบสมัคร _____ / _____ / _____

เลขประจำตัวผู้เสียภาษี					เลขประจำตัวประกันสังคม		
ชื่อ-สกุล (ไทย)					(อังกฤษ)		
วัน/เดือน/ปีเกิด	อายุ	ปี	สูง	ซม.	น้ำหนัก	กก.	เชื้อชาติ
	สัญชาติ		ศาสนา				
	บัตรประชาชนเลขที่			วันที่ออกบัตร / /		วันหมดอายุ	/ /
บ้านเกิด	อำเภอ			จังหวัด		ภาค	
ที่อยู่ปัจจุบัน							

บ้านที่ท่านอยู่เป็น [ ] บ้านของคนเอง [ ] บ้านของบิดามารดา [ ] บ้านเช่า [ ] อาศัยผู้อื่น
[ ] อื่นๆ

ชื่อบิดา _____ อาชีพ _____ อายุ _____ ปี [ ] มีชีวิตอยู่ [ ] เสียชีวิต
ชื่อมารดา _____ อาชีพ _____ อายุ _____ ปี [ ] มีชีวิตอยู่ [ ] เสียชีวิต
พี่น้องร่วมบิดามารดาทั้งสิ้น _____ คน เป็นชาย _____ คน เป็นหญิง _____ คน ท่านเป็นคนที่ _____

สถานภาพการสมรส [ ] โสด [ ] สมรสแล้วเมื่อ พ.ศ. _____ ขณะนี้ [ ] อยู่ร่วมกัน [ ] แยกกันอยู่
[ ] หย่าร้าง
ชื่อคู่สมรส _____ อาชีพ _____ อายุ _____ ปี [ ] มีชีวิตอยู่ [ ] เสียชีวิต
สถานที่ทำงานอยู่ที่ _____ โทรศัพท์ _____
มีบุตรและธิดาจำนวน _____ คน เป็นชาย _____ คน เป็นหญิง _____ คน บุตรเข้ารับการศึกษา _____ คน

ชื่อ-สกุล บุตรและธิดา	อายุ	สถานที่ศึกษา/สถานที่ทำงาน

การเกณฑ์ทหาร [ ] เกณฑ์แล้ว [ ] ยังไม่ได้เกณฑ์ จะเกณฑ์ พ.ศ. _____ ได้รับยกเว้นเพราะ _____

ประวัติการศึกษา	ปีการศึกษา จาก พ.ศ.-พ.ศ.	ชื่อสถานศึกษา	วุฒิการศึกษา	สาขา
ประถมศึกษา				
มัธยมศึกษา				
อาชีวศึกษา				
มหาวิทยาลัย				
อื่นๆ				

Figure E.1.   Application Form.

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ความสามารถพิเศษ

พิมพ์ดีด [ ] ไม่ได้ [ ] ได้ ภาษาไทย _____ คำ/นาที ภาษาอังกฤษ _____ คำ/นาที

คอมพิวเตอร์ [ ] ไม่ได้ [ ] ได้ โปรแกรม _____

การขับขี่รถยนต์ [ ] ไม่ได้ [ ] ได้

[ ] ไม่มีรถยนต์เป็นของตนเอง [ ] มีรถยนต์เป็นของตนเอง

[ ] ไม่มีใบอนุญาตขับขี่ [ ] มีใบอนุญาตขับขี่ ใบอนุญาตขับขี่เลขที่ _____

ภาษาต่างประเทศ	การพูด	การเขียน	การอ่าน (ให้ระบุ ดีมาก , ดี , พอใช้ , อ่อน)
ภาษาอังกฤษ	_____	_____	_____
อื่นๆ _____	_____	_____	_____

ประวัติการทำงาน จาก พ.ศ.-พ.ศ.	ชื่อสถานที่ทำงาน	ตำแหน่ง	ค่าจ้าง	สาเหตุที่ออก
ปัจจุบันทำงานอยู่ที่				

สาเหตุอะไรที่ทำให้ต้องการเปลี่ยนงาน

_____

_____

ทางบริษัทฯ จะติดต่อสอบถามไปยังบริษัทเดิมของท่าน ท่านจะขัดข้องหรือไม่   [ ] ขัดข้อง   [ ] ไม่ขัดข้อง

กรณีฉุกเฉินหรือติดต่อด่วนได้ที่ _____

กีฬาที่ท่านชอบคือ _____ | กีฬาที่ท่านเล่นเป็นคือ _____

งานอดิเรกของท่านคือ _____

ท่านทราบข่าวการรับสมัครงานจาก _____ | โรคที่ท่านเป็นบ่อยที่สุดคือ _____

ในช่วง 3 ปีที่ผ่านมา ท่านเคยได้รับบาดเจ็บหรือป่วยเป็นโรค จนไม่สามารถที่จะปฏิบัติติงานได้เป็นเวลาติดต่อกันมากกว่า 4 วัน

หรือไม่   [ ] ไม่เคย   [ ] เคย ด้วยสาเหตุ _____

ท่านเคยเป็นสมาชิก สมาคม , องค์การ , สหภาพ , หรือชมรมใดหรือไม่

[ ] ไม่เป็น   [ ] เป็น (โปรดระบุ) _____

ท่านเคยถูกจับกุมหรือถูกคุมขังไว้สอบสวน หรือถูกฟ้องร้องโดยเจ้าหน้าที่หรือไม่

[ ] ไม่เคย   [ ] เคย (โปรดระบุ) _____

ท่านดื่มสุราหรือไม่	ท่านสูบบุหรี่หรือไม่	ท่านเคยอุปสมบทหรือยัง
[ ] ไม่ดื่ม [ ] ดื่ม	[ ] ไม่สูบ [ ] สูบ	[ ] ยัง [ ] เคยเป็นเวลา _____

ท่านรู้จักกับผู้หนึ่งผู้ใด ที่ทำงานอยู่ในบริษัทหรือไม่

[ ] ไม่รู้จัก   [ ] รู้จัก

1. _____ อยู่แผนก _____ ตำแหน่ง _____

2. _____ อยู่แผนก _____ ตำแหน่ง _____

3. _____ อยู่แผนก _____ ตำแหน่ง _____

4. _____ อยู่แผนก _____ ตำแหน่ง _____

Figure E.2.   Application Form (Continued).

ท่านได้วางแผนเกี่ยวกับอนาคตของท่านไว้อย่างไร

_____
_____
_____
_____
_____

ให้ท่านระบุชื่อผู้รับรองท่านมา 3 ชื่อ ที่บริษัทฯ สามารถติดต่อได้โดยมิต้องได้รับอนุญาตจากท่านก่อน

ชื่อ - สกุล	อาชีพ	สถานที่ทำงาน	โทรศัพท์

ข้าพเจ้าขอรับรองว่าข้อความทั้งหมดนี้ถูกต้องและเป็นจริงทุกประการ หากข้อความใดไม่ตรงกับความเป็นจริง ข้าพเจ้า
ยินดีที่จะให้บริษัทฯ เลิกจ้าง หรือดำเนินการตามที่บริษัทฯ เห็นสมควร โดยที่ข้าพเจ้าไม่เรียกร้องสิทธิใด ๆ ทั้งสิ้น

ลงชื่อ _____ ผู้สมัคร

                    _____ / _____ / _____

บันทึก�บมริษัท

_____
_____
_____
_____
_____

Figure E.3.   Application Form (Continued).

Leave of Absent

Name: …………………………….   Employee Code: …………………..

Department: …………………………

Leave Type:

(   )   Annual Vacation

(   )   Sick Leave

(   )   Business Leave

(   )   Holiday

From …………………………….   To …………………………….

No. of Day(s) …………………………

Remarks

……………………………………………………………………………………

……………………………………………………………………………………

……………………………………………………………………………………

Sign …………………………….   Date …………………………….

    Employee

(   ) Approve   (   ) Not Approve

Sign …………………………….   Date …………………………….

    Manager/Managing Director

Figure E.4.   Leave of Absent.

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<u>ใบทำงานล่วงเวลา</u>

ชื่อ-นามสกุล ....   เลขประจำตัว ....

ตำแหน่ง ....   แผนก/หน่วยงาน ....

วันที่ปฏิบัติงาน ....

ลำดับที่	รายละเอียดการปฏิบัติงาน	เวลาที่ปฏิบัติงาน (จาก - ถึง)	รวมชั่วโมงการทำงานล่วงเวลา

ลงชื่อ ....   ลงชื่อ ....

      พนักงาน   หัวหน้างาน

<u>หมายเหตุ</u>

- พนักงานต้องเขียนใบทำงานล่วงเวลาก่อนการปฏิบัติงานทุกครั้งเพื่อให้หัวหน้าเซ็นต์อนุมัติ

- หลังจากลงรายละเอียดในใบทำงานล่วงเวลาแล้วให้นำส่งแผนกบุคคล

Figure E.5.   OT Request Form.

Notice of Staff Change

Ref. No...................

Change:

....   Salary

....   Position

....   Other

Date of Change: ....

Employee Code: ....

Employee First Name: ....   Employee Last Name: ....

Previous Position: ....   Department Code: ....

Current Position: ....   Department Code: ....

Current Salary: ....   Previous Salary: ....

% Adjusted: ....   Date Adjusted: ....

Reasons: ....

....

....

....

Recommended By: ....   Approved By: ....

Date: ....   Date: ....

Figure E.6.   Notice of Staff Change.

<u>ความต้องการในการฝึกอบรม</u>

(Employee Training Request)

ชื่อ-นามสกุล ....   หมายเลขพนักงาน ....

ตำแหน่ง ....   แผนก ....

ความต้องการในการฝึกอบรม

หลักสูตร	วันที่	สถานที่	ชนิดของการฝึกอบรม	ราคา
			รวม	

ลงชื่อ ....   ลงชื่อ ....

    พนักงาน   หัวหน้างาน

วันที่ ....   วันที่ ....

Figure E.7.   Training Request Form.

<table>
<tr><td colspan="3">, <u>ใบแจ้งการลาออก</u></td></tr>
<tr><td></td><td></td><td>วันที่ ...... เดือน .... พ.ศ. ....</td></tr>
</table>

เรื่อง   :   ....

เรียน   :   ....

             ข้าพเจ้า นาย, นาง, นางสาว .... ฝ่าย

.... แผนก ....

             ขอลาออกจากการเป็นพนักงานบริษัทฯตั้งแต่วันที่ .... เดือน .... พ.ศ.

................เป็นต้นไป

             เหตุผลที่ออก..

....

....

....

             จึงเรียนมาเพื่อพิจารณา

                                  ลงชื่อ ....

                                        (   )

รับทราบ ....   ผู้อนุมัติ ....

(   )   (   )

         ผู้บังคับบัญชา   กรรมการผู้จัดการ

Figure E.8.   Leave Request Form.

APPENDIX   F

USER INTERFACE DESIGN/USER MANUAL
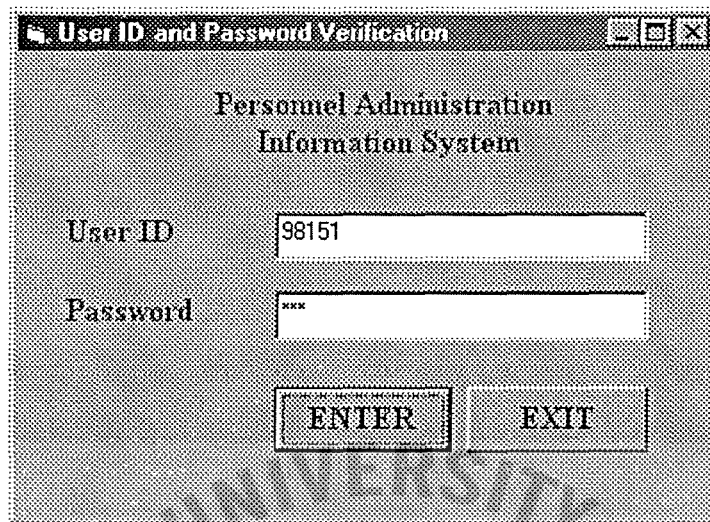
Figure F.1.   User Identification.

User Manual

(1)   Enter your user ID (same as ID code).

(2)   Enter your password.

(3)   Click **ENTER** button or press enter button on a keyboard to get access

into the main program. See Figure F.3.

(4)   Click **EXIT** to exit the program.
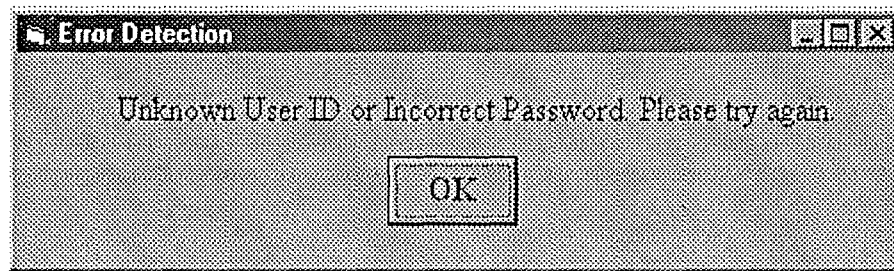
Figure F.2.   Security Control.

User Manual

(1) If wrong user ID or incorrect password was enter, the system will ask to
     try an access again.

(2) Click **OK** tore-enter the user ID and password.
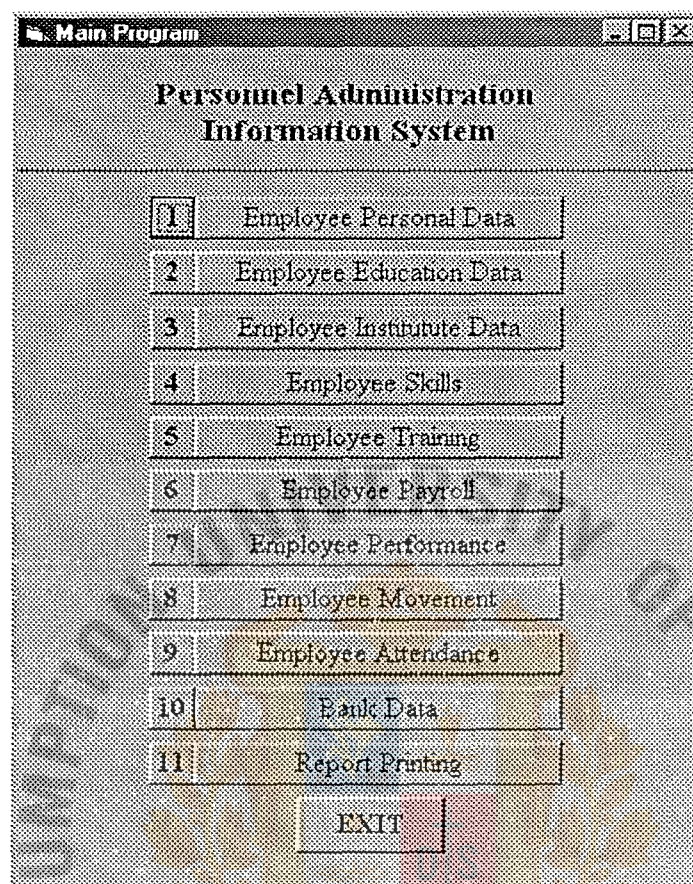
Figure F.3.   Main Program.

User Manual

(1)   Click button No.1 to enter Employee Personal data. See Figure F.4.

(2)   Click button No.2 to enter Employee Education data. See Figure F.8.

(3)   Click button No.3 to enter Employee Institute data. See Figure F.7.

(4)   Click button No.4 to enter Employee Skill. See Figure F.12.

(5)   Click button No.5 to enter Employee Training data. See Figure F.6.

(6)   Click button No.6 to enter Employee Payroll. See Figure F.9.

(7)   Click button No.7 to enter Employee Performance. See Figure F.11.

(8)   Click button No.8 to enter Employee Movement. See Figure F.5.

(9)   Click button No.9 to enter Employee Attendance. See Figure F.10.

(10) Click button No.10 to enter Bank data. See Figure F.13.

(11) Click button No.11 to enter main menu for Reporting Printing. See Figure
      F.14.

(12) Click **EXIT** button to exit the main program.

Figure F.4.   Employee Personal Data.

<u>User Manual</u>

(1)   Enter employee personal data in the blank boxes provided or select

appropriate information provided in each list box.

(2)   Click **EDIT** button if changes of information required.

(3)   Click **DELETE** button to delete all on screen information or record.

(4)   Click **SAVE** button to save current record.

(5)   Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.5.   Employee Movement Record.

User Manual

(1)   Select employee position code.

(2)   Enter employee code in the blank box provided.

(3)   Enter position description, previous position, and previous company in the boxes provided.

(4)   Enter date of position change and ended salary.

(5)   Click **EDIT** button if changes of information required.

(6)   Click **DELETE** button to delete all on screen information or record.

(7)   Click **SAVE** button to save current record.

(8)   Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.6.   Employee Training Record.

User Manual

(1)   Select training type from the list box.

(2)   Enter employee code.

(3)   Enter training course name, training company, date, and training course in

the boxes provided.

(4)   The system will add up total training cost and total training hour

automatically.

(5)   Click **EDIT** button if changes of information required.

(6)   Click **DELETE** button to delete all on screen information or record.

(7)   Click **SAVE** button to save current record.

(8)   Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.7.   Institute Record.

User Manual

(1)   Select or key in institute code from the list box.

(2)   Enter institute information such as address, zip code, and telephone

number.

(3)   Select institute province.

(4)   Click **EDIT** button if changes of information required.

(6)   Click **DELETE** button to delete all on screen information or record.

(7)   Click **SAVE** button to save current record.

(8)   Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.8.   Employee Education Record.

User Manual

(1)   Enter employee code.

(2)   Select education code and institute code.

(3)   Enter major subject.

(4)   Select education year.

(5)   Key in GPA acquired.

(6)   Click **EDIT** button if changes of information required.

(7)   Click **DELETE** button to delete all on screen information or record.

(8)   Click **SAVE** button to save current record.

(9)   Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.9.   Employee Payroll.

<u>User Manual</u>

(1)   Enter employee code.

(2)   Key in current salary.

(3)   The system will automatically calculate tax, provident fund, and social

security fund.

(4)   Enter other deduction.

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(5) The system will automatically calculate net payment of each employee.

(6) Select pay date and bank code.

(7) Account number of each employee will appeared automatically on screen.

(8) Click **EDIT** button if changes of information required.

(9) Click **DELETE** button to delete all on screen information or record.

(10) Click **SAVE** button to save current record.

(11) Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.10.   Employee Attendance Record.

User Manual

(1)   Key in employee code.

(2)   Select leave type.

(3)   Add used date. The system will automatically calculate balance date.

(4)   Add OT hour of each employee (if applicable).

(5)   Click **EDIT** button if changes of information required.

(6)   Click **DELETE** button to delete all on screen information or record.

(7)   Click **SAVE** button to save current record.

(8)   Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.11.   Employee Performance Record.

<u>User Manual</u>

(1)   Key in employee code.

(2)   Enter evaluation date.

(3)   Enter current salary and previous salary. The system will automatically calculate % of salary adjusted.

(4)   Enter adjusted date.

(5)   Select performance level.

(6)   Add comments/suggestions in the blank box provided.

(7)   Click **EDIT** button if changes of information required.

(8) Click **DELETE** button to delete all on screen information or record.

(9) Click **SAVE** button to save current record.

(10) Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.12.   Employee Skill Record.

<u>User Manual</u>

(1)   Key in employee code.

(2)   Select each skill level as shown on screen.

(3)   Click **EDIT** button if changes of information required.

(4)   Click **DELETE** button to delete all on screen information or record.

(5)   Click **SAVE** button to save current record.

(6)   Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.13. Bank Data.

<u>User Manual</u>

(1) Enter new bank code, e.g. BBL, TFB, BOA, etc.

(2) Enter bank full name.

(3) Enter bank information such as address, province, zip code, and tel. no. and fax no.

(4) Click **EDIT** button if changes of information required.

(5) Click **DELETE** button to delete all on screen information or record.

(6)   Click **SAVE** button to save current record.

(7)   Click **EXIT** button to exit to the main program. See Figure F.3.

Figure F.14.   Report Printing Menu.

<u>User Manual</u>

(1)   Click button No.1 to print Employee Personal Information Report, see

Figure F.15.

(2)   Click button No.2 to print Employee Education Report, see Figure F.18.

(3)   Click button No.3 to print Employee Institute Report, see Figure F.21.

(4)   Click button No.4 to print Employee Skill Report, see Figure F.20.

(5)   Click button No.5 to print Employee Training Report, see Figure F.17.

(6) Click button No.6 to print Employee Payroll Report, see Figure F.23.

(7) Click button No.7 to print Employee Performance Report, see Figure

F.19.

(8) Click button No.8 to print Employee Movement Report, see Figure F.16.

(9) Click button No.9 to print Employee Attendance Report, see Figure F.24.

(10) Click **RETURN TO MAIN MENU** button to return to PAIS main menu.

Figure F.15.   Personal Data Report.

<u>User Manual</u>

(1)   Select the print range by enter employee code from _____ to _____

(2)   Select period of report by month and year.

(3)   Click **PRINT** button to confirm printing process.

(4)   Click **EXIT** button to exit to the main program.

Figure F.16.   Movement Report.

<u>User Manual</u>

(1)   Select the print range by enter employee code from _____ to _____

(2)   Select period of report by month and year.

(3)   Select print options: by person, by department, or by all position.

(4)   Click **PRINT** button to confirm printing process.

(5)   Click **EXIT** button to exit to the main program.

Figure F.17. Training Report.

<u>User Manual</u>

(1) Select the print range by enter employee code from _____ to _____

(2) Select period of report by month and year.

(3) Select print options: by person, by department, or by all position.

(4) Click **PRINT** button to confirm printing process.

(5) Click **EXIT** button to exit to the main program.

Figure F.18.   Education Report.

User Manual

(1)   Select the print range by enter employee code from _____ to _____

(2)   Select print options: by person, by department, or by all position.

(3)   Click **PRINT** button to confirm printing process.

(4)   Click **EXIT** button to exit to the main program.

Figure F.19. Performance Report.

User Manual

(1) Select the print range by enter employee code from _____ to _____

(2) Select period of report by year.

(3) Select print options: by person, by department, or by all position.

(4) Click **PRINT** button to confirm printing process.

(5) Click **EXIT** button to exit to the main program.

Figure F.20.   Skill Report.

<u>User Manual</u>

(1)   Select the print range by enter employee code from _____ to _____

(2)   Select print options: by person, by department, or by all position.

(3)   Click **PRINT** button to confirm printing process.

(4)   Click **EXIT** button to exit to the main program.

Figure F.21. Institute Report.

User Manual

(1) Select the print range by enter employee code from _____ to _____

(2) Select print options: by person, by department, or by all position.

(3) Click **PRINT** button to confirm printing process.

(4) Click **EXIT** button to exit to the main program.
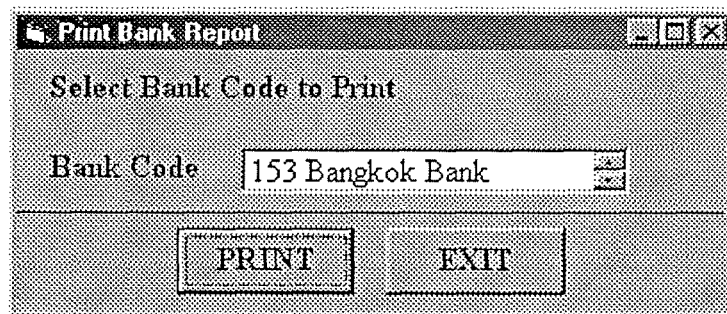
Figure F.22. Bank Report.

<u>User Manual</u>

(1)   Select the bank code to print.

(2)   Click **PRINT** button to confirm printing process.

(3)   Click **EXIT** button to exit to the main program.

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Figure F.23.   Payroll Report.

<u>User Manual</u>

(1)   Select the print range by enter employee code from _____ to _____

(2)   Select period of report by month and year.

(3)   Select print options: by person, by department, or by all position.

(4)   Click **PRINT** button to confirm printing process.

(5)   Click **EXIT** button to exit to the main program.

Figure F.24. Attendance Report.

User Manual

(1) Select the print range by enter employee code from _____ to _____

(2) Select period of report by month and year.

(3) Select print options: by person, by department, or by all position.

(4) Click **PRINT** button to confirm printing process.

(5) Click **EXIT** button to exit to the main program.

APPENDIX   G

OUTPUT DESIGN

ใบแจ้งเงินเดือนและค่าจ้าง

บริษัท พีคิว เคมิคอลส์ ประเทศไทย) จำกัด

จ่าย ณ วันที่ .... เดือน .... พ.ศ. ....

หมายเลขพนักงาน ....

ชื่อ-นามสกุล .... ตำแหน่ง ....

แผนก ....

รายได้   รายจ่าย

อัตราค่าจ้าง .... ภาษี ....

ค่าล่วงเวลา .... ประกันสังคม ....

ค่าเบี้ยเลี้ยง .... เงินสะสมพนักงาน ....

รายได้รวม .... รายจ่ายรวม ....

รายได้สุทธิ ....

จำนวนวันทำงาน .... วัน

จำนวนชั่วโมงการทำงานล่วงเวลา .... ชั่วโมง

จำนวนวันลา   ลาป่วย .... วัน   ลาพักร้อน .... วัน

                  ลากิจ .... วัน   ลาหยุด .... วัน

Figure G.1.   Pay Slip.

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<table>
<tr><td colspan="2" align="center">ประวัติพนักงาน รายบุคคล</td></tr>
<tr><td colspan="2" align="center">บริษัท พีคิว เคมิคอลส์ (ประเทศไทย) จำกัด</td></tr>
</table>

วันที่ออกรายงาน .... เดือน .... พ.ศ. ....

หมายเลขพนักงาน	ชื่อ-นามสกุล ....
แผนก	ตำแหน่ง ....
พนักงานประเภท	อัตราเงินเดือน .... บาท
วัน-เดือน-ปี เกิด	วุฒิการศึกษา ....
สถานะภาพสมรส	สถาบันการศึกษา ....
ปีที่จบการศึกษา	เกรดเฉลี่ย..............................

เลขที่บัตรประจำตัวประชาชน ....

เลขที่บัตรประกันสังคม ....

เลขประจำตัวผู้เสียภาษี ....

รหัสธนาคาร ....

หมายเลขบัญชี ....

เริ่มเข้าทำงานเมื่อ	ตำแหน่งงาน ....
อัตราค่าจ้างแรก	
วันที่ออกจากงาน	ตำแหน่งงาน ....
อัตราค่าจ้างขั้นสุดท้าย......................	
รวมอายุงาน	

ที่อยู่ปัจจุบัน

....

....

....

จังหวัด	รหัสไปรษณีย์ ....
หมายเลขโทรศัพท์	

Figure G.2.   Employee Personal Data.

PQ Chemicals (Thailand) Limited
Employee Payroll Report - By Person
Pay Date : ....

Employee Code: From .... To ....   Date of Issue: ....

Employee Code	Name	Salary	OT Payment	Allowance	Total Income	Income Tax	Social Secrity Fund	Provident Fund	Total Deduction	Net Income
91001	Mr. Vichai Poojira	17,000.00	350.00	1,800.00	19,150.00	113.33	70.83	99.17	283.33	18,866.67
91002	Mr. Bunlue Sangsung	12,500.00	400.00	1,800.00	14,700.00	83.33	52.08	72.92	208.33	14,491.67
91003	Ms. Kanchana Nimkun	14,500.00	0.00	1,000.00	15,500.00	96.67	60.42	84.58	241.67	15,258.33
92002	Mr. Prasit Iamlak	21,500.00	0.00	2,500.00	24,000.00	143.33	89.58	125.42	358.33	23,641.67
92005	Ms. Sirivan Paisalsin	12,650.00	200.00	1,800.00	14,650.00	84.33	52.71	73.79	210.83	14,439.17
93001	Ms. Vilai Mankong	8,500.00	400.00	1,800.00	10,700.00	56.67	35.42	49.58	141.67	10,558.33
93005	Mr. Prasong Yingdaichom	11,500.00	550.00	2,200.00	14,250.00	76.67	47.92	67.08	191.67	14,058.33
93006	Mr. Yod Poongam	13,500.00	450.00	2,000.00	15,950.00	90.00	56.25	78.75	225.00	15,725.00
94001	Ms. Pimolporn Asavapiroon	26,000.00	0.00	3,000.00	29,000.00	173.33	108.33	151.67	433.33	28,566.67

Total Number of Employee : 9   Net Pay :   155,605.83

Figure G.3.   Employee Payroll Report – By Person.

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PQ Chemicals (Thailand) Limited
Employee Payroll Report – By Department
Pay Date : ....

Department Code: 001 (Management)   Date of Issue: ....

Employee Code	Name	Salary	OT Payment	Allowance	Total Income	Income Tax	Social Security Fund	Provident Fund	Total Deduction	Net Income
96133	Mr. Matthe van Dam	250,000.00	0.00	30,000.00	280,000.00	1,666.67	1,041.67	1,458.33	4,166.67	275,833.33
98143	Mr. Chairat Suwanprasert	110,000.00	0.00	25,000.00	135,000.00	733.33	458.33	641.67	1,833.33	133,166.67
98144	Ms. Suchada Ruedeevan	100,000.00	0.00	20,000.00	120,000.00	666.67	416.67	583.33	1,666.67	118,333.33
99151	Mr. Frank Timmons	120,000.00	0.00	25,000.00	145,000.00	800.00	500.00	700.00	2,000.00	143,000.00
99152	Mr. Prasit Rungruenspanya	70,000.00	0.00	15,000.00	85,000.00	466.67	291.67	408.33	1,166.67	83,833.33
Total Number of Employee : 5								**Net Pay :**		**754,166.67**

Department Code: 002 (Marketing)   Date of Issue: ....

Employee Code	Name	Salary	OT Payment	Allowance	Total Income	Income Tax	Social Security Fund	Provident Fund	Total Deduction	Net Income
94006	Mr. Suriyan Patipan	35,000.00	0.00	3,000.00	38,000.00	233.33	145.83	204.17	583.33	37,416.67
94010	Mr. Suporn Limnipat	30,000.00	0.00	3,000.00	33,000.00	200.00	125.00	175.00	500.00	32,500.00
95003	Ms. Punnee Kamdaeng	25,000.00	0.00	1,000.00	26,000.00	166.67	104.17	145.83	416.67	25,583.33
95006	Ms. Sunantha Palapol	22,000.00	0.00	1,000.00	23,000.00	146.67	91.67	128.33	366.67	22,633.33
95012	Ms. Siranat Suthawan	17,000.00	0.00	1,000.00	18,000.00	113.33	70.83	99.17	283.33	17,716.67
Total Number of Employee : 5								**Net Pay :**		**135,850.00**

Department Code: 003 (Accounting)   Date of Issue: ....

Employee Code	Name	Salary	OT Payment	Allowance	Total Income	Income Tax	Social Security Fund	Provident Fund	Total Deduction	Net Income
95008	Mr. Pimol Woowong	28,000.00	0.00	1,000.00	29,000.00	186.67	116.67	163.33	466.67	28,533.33
96003	Mr. Soonthorn Thumna	20,000.00	0.00	1,000.00	21,000.00	133.33	83.33	116.67	333.33	20,666.67
96005	Mr. Anan Makrak	8,000.00	0.00	1,000.00	9,000.00	53.33	33.33	46.67	133.33	8,866.67
Total Number of Employee : 3								**Net Pay :**		**58,066.67**

Figure G.4.   Employee Payroll Report – By Department.

PQ Chemicals (Thailand) Limited
Employee Performance Evaluation
End of December Year ....

Employee Code: From .... To ....

Employee Code	Name	Position Code	Position Description	Current Salary	Previous Salary	% Adjusted	Adjusted Date	Performance Level	Evaluation Date
91001	Mr. Vichai Poojira	08	(Maintenance Supervisor)	17,000.00	16,150.00	5	31/12/98	G	31/11/98
91002	Mr. Bunlue Sangsung	02	(Forklift Driver)	12,500.00	12,000.00	4	31/12/98	G	31/11/98
91003	Ms. Kanchana Nimkun	03	(Accounting Supervisor)	14,500.00	13,702.50	5.5	31/12/98	E	31/11/98
92002	Mr. Prasit Iamlak	12	(Mechanical Engineer)	21,500.00	20,747.50	3.5	31/12/98	F	31/11/98
92005	Ms. Sirivan Paisalsin	11	(Mechanical Technician)	12,650.00	12,144.00	4	31/12/98	G	31/11/98
93001	Ms. Vilai Mankong	04	(Canteen Supervisor)	8,500.00	8,160.00	4	31/12/98	G	31/11/98
93005	Mr. Prasong Yingdaichom	01	(Lab Operator)	11,500.00	11,155.00	3	31/12/98	F	31/11/98
93006	Mr. Yod Poongam	06	(Lab Technician)	13,500.00	13,095.00	3	31/12/98	F	31/11/98
94001	Ms. Pimolporn Asavapiroon	09	(Customer Coordinator)	26,000.00	24,700.00	5	31/12/98	E	31/11/98
94006	Mr. Suriyan Patipan	01	(Production Manager)	35,000.00	33,950.00	3	31/12/98	G	31/11/98
94010	Mr. Suporn Limnipat	07	(Supply Manager)	30,000.00	29,190.00	2.7	31/12/98	B	31/11/98
95003	Ms. Punnee Kamdaeng	09	(Customer Coordinator)	25,000.00	24,250.00	3	31/12/98	G	31/11/98
95006	Ms. Sunantha Palapol	03	(Accounting Supervisor)	28,000.00	26,880.00	4	31/12/98	G	31/11/98
95008	Mr. Pimol Woowong	03	(Accounting Supervisor)	28,000.00	26,880.00	4	31/12/98	G	31/11/98
95012	Ms. Siranat Suthawan	14	(Secretary)	17,000.00	16,320.00	4	31/12/98	G	31/11/98
96003	Mr. Soonthorn Thumna	05	(Accounting Officer)	20,000.00	19,000.00	5	31/12/98	E	31/11/98
96005	Mr. Anan Makrak	13	(Messenger)	8,000.00	7,760.00	3	31/12/98	G	31/11/98
96133	Mr. Matthe van Dam	10	(Management)	250,000.00	242,500.00	3	31/12/98	G	31/11/98
98143	Mr. Chairat Suwanprasert	10	(Management)	110,000.00	106,700.00	3	31/12/98	G	31/11/98
98144	Ms. Suchada Ruedeevan	10	(Management)	100,000.00	96,000.00	4	31/12/98	G	31/11/98
99151	Mr. Frank Timmons	10	(Management)	120,000.00	113,400.00	5.5	31/12/98	E	31/11/98
99152	Mr. Prasit Rungruenspanya	10	(Management)	70,000.00	66,150.00	5.5	31/12/98	E	31/11/98

Total Number of Employee : 22

Figure G.5.   Employee Performance Evaluation.

PQ Chemicals (Thailand) Limited
Employee Leave Record By Organization
As of ....

Employee Code: From .... To ....

Employee Code	Name	Leave Type				No. of Day(s) Used	Balance
		Sick	Holiday	Vacation	Business		
91001	Mr. Vichai Poojira	2	0	4	1	7	15
91002	Mr. Bunlue Sangsung	0	0	5	0	5	17
91003	Ms. Kanchana Nimkun	3	2	4	0	9	13
92002	Mr. Prasit Iamlak	1	2	5	2	10	12
92005	Ms. Sirivan Paisalsin	3	3	7	1	14	8
93001	Ms. Vilai Mankong	6	1	6	2	15	7
93005	Mr. Prasong Yingdaichom	0	1	6	0	7	15
93006	Mr. Yod Poongam	4	1	5	1	11	11
94001	Ms. Pimolporn Asavapiroon	3	1	4	1	9	13
94006	Mr. Suriyan Patipan	1	2	4	1	8	14
94010	Mr. Suporn Limnipat	1	4	3	1	9	13
95003	Ms. Punnee Kamdaeng	2	4	2	1	9	13
95006	Ms. Susantha Palapol	5	4	1	0	10	12
95008	Mr. Pimol Woowong	3	3	3	0	9	13
95012	Ms. Siranat Suthawan	2	3	5	2	12	10
96003	Mr. Soonthorn Thumna	1	2	4	1	8	14
96005	Mr. Anan Makrak	1	5	5	2	13	9
96133	Mr. Matthe van Dam	0	3	7	1	11	11
98143	Mr. Chairat Suwanprasert	2	2	9	1	14	8
98144	Ms. Suchada Ruedeevan	0	1	5	2	8	14
99151	Mr. Frank Timmons	0	2	5	0	7	15
99152	Mr. Prasit Rungruenspanya	4	1	6	0	11	11
Total by Organization		44	47	105	20	216	268

Figure G.6. Employee Leave Record By Organization.

PQ Chemicals (Thailand) Limited
Employee Leave Record By Department
As of ....

Department Code: 001 (Management)

Employee Code	Name	Leave Type				No. of Day(s) Used	Balance
		Sick	Holiday	Vacation	Business		
96133	Mr. Matthe van Dam	3	3	3	0	9	13
98143	Mr. Chairat Suwanprasert	2	3	5	2	12	10
98144	Ms. Suchada Ruedeevan	1	2	4	1	8	14
99151	Mr. Frank Timmons	1	5	5	2	13	9
99152	Mr. Prasit Rungruenspanya	0	3	7	1	11	11
Total by Department		7	16	24	6	53	57

Department Code: 002 (Marketing)

Employee Code	Name	Leave Type				No. of Day(s) Used	Balance
		Sick	Holiday	Vacation	Business		
94006	Mr. Suriyan Patipun	1	5	5	2	13	9
94010	Mr. Suporn Limnipat	0	3	7	1	11	11
95003	Ms. Punnee Kamdaeng	2	2	9	1	14	8
95006	Ms. Sunantha Palapol	3	2	4	0	9	13
95012	Ms. Siranat Suthawan	1	2	5	2	10	12
Total by Department		21	46	78	18	163	167

Figure G.7. Employee Leave Record By Department.

PQ Chemicals (Thailand) Limited
Employee Salary History
As of ....

Employee Code: From .... To ....

Employee Code	Name	Position Code	Position Description	Current Salary	Previous Salary	% Adjusted	Adjusted Date
91001	Mr. Vichai Poojira	08	(Maintenance Supervisor)	17,000.00	16,150.00	5	31/12/98
91002	Mr. Bunlue Sangsung	02	(Forklift Driver)	12,500.00	12,000.00	4	31/12/98
91003	Ms. Kanchana Nimkun	03	(Accounting Supervisor)	14,500.00	13,702.50	5.5	31/12/98
92002	Mr. Prasit Iamlak	12	(Mechanical Engineer)	21,500.00	20,747.50	3.5	31/12/98
92005	Ms. Sirivan Paisalsin	11	(Mechanical Technician)	12,650.00	12,144.00	4	31/12/98
93001	Ms. Vilai Mankong	04	(Canteen Supervisor)	8,500.00	8,160.00	4	31/12/98
93005	Mr. Prasong Yingdaichom	01	(Lab Operator)	11,500.00	11,155.00	3	31/12/98
93006	Mr. Yod Poongam	06	(Lab Technician)	13,500.00	13,095.00	3	31/12/98
94001	Ms. Pimolporn Asavapiroon	09	(Customer Coordinator)	26,000.00	24,700.00	5	31/12/98
94006	Mr. Suriyan Patipan	01	(Production Manager)	35,000.00	33,950.00	3	31/12/98
94010	Mr. Suporn Limnipat	07	(Supply Manager)	30,000.00	29,190.00	2.7	31/12/98
95003	Ms. Punnee Kamdaeng	09	(Customer Coordinator)	25,000.00	24,250.00	3	31/12/98
95006	Ms. Sunantha Palapol	03	(Accounting Supervisor)	28,000.00	26,880.00	4	31/12/98
95008	Mr. Pimol Woowong	03	(Accounting Supervisor)	28,000.00	26,880.00	4	31/12/98
95012	Ms. Siranat Suthawan	14	(Secretary)	17,000.00	16,320.00	4	31/12/98
96003	Mr. Soonthorn Thumna	05	(Accountinf Officer)	20,000.00	19,000.00	5	31/12/98
96005	Mr. Anan Makrak	13	(Messenger)	8,000.00	7,760.00	3	31/12/98
96133	Mr. Matthe van Dam	10	(Management)	250,000.00	242,500.00	3	31/12/98
98143	Mr. Chairat Suwanprasert	10	(Management)	110,000.00	106,700.00	3	31/12/98
98144	Ms. Suchada Ruedeevan	10	(Management)	100,000.00	96,000.00	4	31/12/98
99151	Mr. Frank Timmons	10	(Management)	120,000.00	113,400.00	5.5	31/12/98
99152	Mr. Prasit Rungruenspanya	10	(Management)	70,000.00	66,150.00	5.5	31/12/98

Total Number of Employee : 22

Figure G.8.   Employee Salary History.

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PQ Chemicals (Thailand) Limited
Employee Training History
As of ....

Employee Code: From .... To ....

Employee Code	Name	Position	Training Code	Training Type	Date	Total Day(s)
91001	Mr. Vichai Poojira	(Maintenance Supervisor)	I	1. Machine Check	27/05/1999	1
			E	2. Equipment repair	14/03/1999	1
91002	Mr. Bunlue Sangsung	(Forklift Driver)	I	-		
			E	-		
91003	Ms. Kanchana Nimkun	(Accounting Supervisor)	I	1. English for accounting staff	15/04/1995	1
			E	2. Purchasing Order process	10/03/1996	1
				3. Billing process	02/04/1997	1
92002	Mr. Prasit Iamlak	(Mechanical Engineer)	I	1. Machine Check	27/05/1999	1
			E	1. Stock of Equipment	12/09/1995	1
92005	Ms. Sirivan Paisalsin	(Mechanical Technician)	I	1. Machine Check	27/05/1999	1
			E	2. Equipment repair	14/03/1999	1
93001	Ms. Vilai Mankong	(Canteen Supervisor)	I	-		
			E	-		
93005	Mr. Prasong Yingdaichom	(Lab Operator)	I	1. Testing process	25/08/1994	
			E	2. Measurement method	30/03/1995	

Figure G.9. Employee Training History.

PQ Chemicals (Thailand) Limited
Employee Personal Information
As of ....

Employee Code: From .... To
....

Employee Code	Name	Position Code	Position Description	Address	Province	Zip Code	Telephone Number
91001	Mr. Vichai Poojira	08	(Maintenance Supervisor)	38/14 Soi Naklua 13, Sriracha	Chonburi		038-347126
91002	Mr. Bunlue Sangsung	02	(Forklift Driver)	20 Moo 4 Pattaya Nua Road,	Chonburi		038-411233
91003	Ms. Kanchana Nimkun	03	(Accounting Supervisor)	298 Tessabal Songkroh Road, Bangkapi	Bangkok	10700	519-957
92002	Mr. Prasit Iamlak	12	(Mechanical Engineer)	37 Tanon Udomkarn, Naklua	Chonburi		038-344218
92005	Ms. Sirivan Paisalsin	11	(Mechanical Technician)	79/124 Moo 3, Tambol Tungsukla	Chonburi		038-422765
93001	Ms. Vilai Mankong	04	(Canteen Supervisor)	344/23 Moo 4, Pattaya Nua Road	Chonburi		038-343766

Figure G.10.   Employee Personal Information.

PQ Chemicals (Thailand) Limited
Employee Educational Backgrounds
As of ....

Employee Code: From .... To ....

Employee Code	Name	Education Code	Education Description	Major Subject	Education Year	GPA
94010	Mr. Suporn Limnipat	B	Bachelor	Marketing	1984	3.25
95003	Ms. Punnee Kamdaeng	B	Bachelor	Marketing	1984	3.10
95006	Ms. Sunantha Palapol	B	Bachelor	Accounting	1985	2.70
95008	Mr. Pimol Woowong	B	Bachelor	Accounting	1988	3.27
95012	Ms. Siranat Suthawan	M	Master	Business Administration	1982	3.54
96003	Mr. Soonthorn Thumna	C	College	Accounting	1985	2.85
96005	Mr. Anan Makrak	V	Vocational Level	Accounting	1981	3.00

Figure G.11.   Employee Educational Backgrounds.

PQ Chemicals (Thailand) Limited
Employee Listing by Position
As of ....

Date: ....

			Join Date
Position Code	10		
Position Description	Management		
Employee Code	Name		
96133	Mr. Matthe van Dam		01/03/1996
98143	Mr. Chairat Suwanprasert		15/05/1998
98144	Ms. Suchada Ruedeevan		01/06/1998
99151	Mr. Frank Timmons		01/09/1999
99152	Mr. Prasit Rungruenspanya		15/11/1999
			Join Date
Position Code	13		
Position Description	Messenger		
Employee Code	Name		
96005	Mr. Anan Makrak		01/06/1996
			Join Date
Position Code	14		
Position Description	Secretary		
Employee Code	Name		
95012	Ms. Siranat Suthawan		15/07/1995
			Join Date
Position Code	09		
Position Description	Customer Coordinator		
Employee Code	Name		
94001	Ms. Pimolporn Asavapiroon		01/07/1994
95003	Ms. Punnee Kamdaeng		15/01/1995

Figure G.12.   Employee Listing by Person.

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PQ Chemicals (Thailand) Limited
Manpower Summary Report
For the Month of ....

Employee Code	Name	Position Code	Current Position	Previous Position	Previous Company	Date Change
91001	Mr. Vichai Poojira	08	(Maintenance Supervisor)	Maintenance Officer	PQ Chemicals (Thailand) Ltd.	22/09/1991
91002	Mr. Bunlue Sangsung	02	(Forklift Driver)	Driver	Meyer	31/06/1991
91003	Ms. Kanchana Nimkun	03	(Accounting Supervisor)	Accounting Officer	Seagate	30/04/1991
92002	Mr. Prasit Iamlak	12	(Mechanical Engineer)	Mechanical Engineer	PQ Chemicals (Thailand) Ltd.	20/05/1992
92005	Ms. Sirivan Paisalsin	11	(Mechanical Technician)	Maintenance Officer	PQ Chemicals (Thailand) Ltd.	29/04/1992
93001	Ms. Vilai Mankong	04	(Canteen Supervisor)	Canteen Staff	PQ Chemicals (Thailand) Ltd.	30/07/1993
93005	Mr. Prasong Yingdaichom	01	(Lab Operator)	Lab Officer	PQ Chemicals (Thailand) Ltd.	19/04/1993
93006	Mr. Yod Poongam	06	(Lab Technician)	Lab Officer	PQ Chemicals (Thailand) Ltd.	25/09/1993
94001	Ms. Pimolporn Asavapiroon	09	(Customer Coordinator)	Customer Coordinator	Mitsui	30/09/1994
94006	Mr. Suriyan Patipan	01	(Production Manager)	Senior Production Supervisor	OOCL	31/03/1994
94010	Mr. Suporn Limnipat	07	(Supply Manager)	Senior Supply Manager	PQ Chemicals (Thailand) Ltd.	-
95003	Ms. Punnee Kamdaeng	09	(Customer Coordinator)	Customer Coordinator	Green Siam	23/07/1995
95006	Ms. Sunantha Palapol	03	(Accounting Supervisor)	Accounting Officer	Kao Corporation	12/04/1995
95008	Mr. Pimol Woowong	03	(Accounting Supervisor)	Accounting Officer	PQ Chemicals (Thailand) Ltd.	30/04/1995
95012	Ms. Siranat Suthawan	14	(Secretary)	Secretary	PQ Chemicals (Thailand) Ltd.	-
96003	Mr. Soonthorn Thumna	05	(Accounting Officer)	Accounting Officer	PQ Chemicals (Thailand) Ltd.	-
96005	Mr. Anan Makrak	13	(Messenger)	Messenger	Mitsui	30/06/1996
96133	Mr. Matthe van Dam	10	(Management)	Managing Director	Akzo Nobel	30/05/1996
98143	Mr. Chairat Suwanprasert	10	(Management)	Marketing Manager	PQ Chemicals (Thailand) Ltd.	-

Figure G.13.   Employee Movement.

PQ Chemicals (Thailand) Limited
Manpower Summary Report
For the Month of ....

Date: ....

Department Code	Department Description	New	Resigned	Retired	Present	Total
001	Management	1	0	0	8	9
002	Marketing	0	0	0	6	6
003	Accounting	2	1	0	5	5
004	Production	0	1	0	35	37
005	Maintenance	0	0	0	24	24
006	Supply					
007	Purchasing					
008	Personnel					

Figure G.14.   Manpower Summary Report.

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