



Accounts Payable System for Ticon
Public Company Limited

by

Mr. Komkrit Laowakoon

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

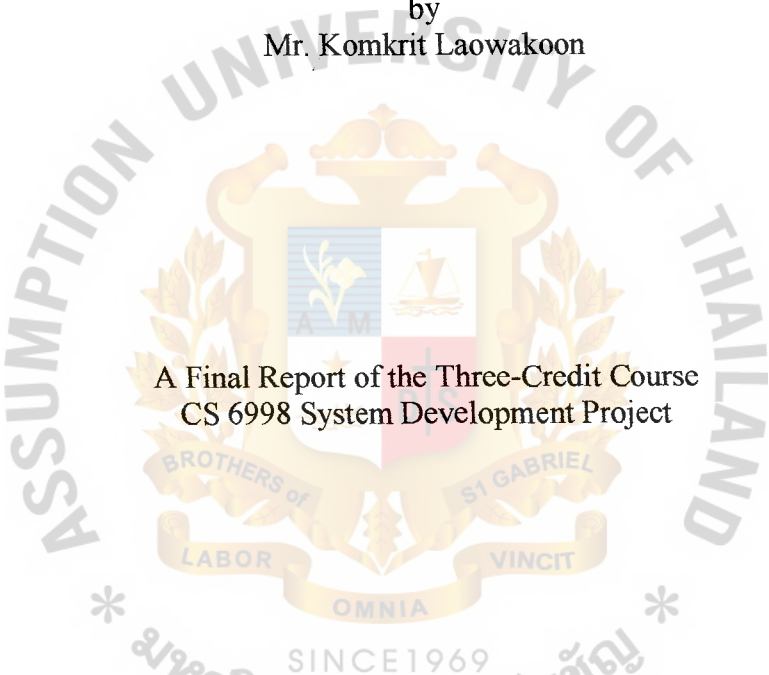
Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Computer Information Systems
Assumption University

July 2002

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Project Title	Accounts Payable System for Ticon Public Company Limited
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Project Advisor	Air Marshal Dr. Chulit Meesajjee
Academic Year	July 21, 2002

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.

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ABSTRACT

Ticon Public Company Limited is a joint venture established in 1990 between Siam Venture B. V, Asia Sermkit Co., Ltd., ABN AMRO Asia Securities Public Co., Ltd., and four other entities. Ticon aims to facilitate the construction and financing of high quality factories for sales or lease.

The nature of standard factory construction requires several subcontractors to complete each stage of the project. Further more, several vendors need to supply materials, equipment, accessories, and spare parts to support the construction. This create a need for company to acquire an appropriate accounts payable system to handle payment of such subcontractors and vendors.

The main objective of the development is to create a new system that allows the company to have more opportunity to grow and expand by using computerized system. This project emphasizes on designing the new system that improves the existing operation and solves the existing problems.

The proposed system is developed in accordance to the system analysis and design techniques. All data are kept in the database server, so the information can be shared among the users. The new system will serve computerized operations and produce input process and generate output more efficiently, therefore it will reduce errors and operation cost.

ACKNOWLEDGEMENTS

Many people have made contributions to this project. The writer would like to acknowledge their effort and thank them for their contributions.

First and foremost, he would like to thank Air Marshal Dr. Chulit Meesajjee, his project advisor, for his valuable suggestions and advice given in the preparation of this project.

Sincere thanks also are extended to all faculty members, staffs, and secretaries of the School of Computer Information Systems for their assistance during the study at Assumption University.

Finally, appreciation is extended to his family and his best friends for their love and support and to all others who have helped with the completion of this project.

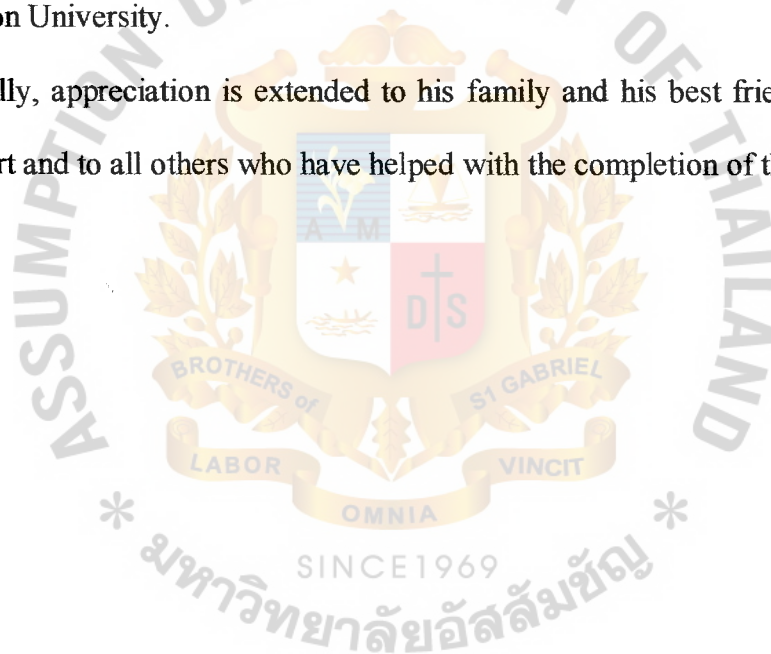


TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
ABSTRACT	i
ACKNOWLEDGEMENTS	ii
LIST OF FIGURES	v
LIST OF TABLES	xi
I. INTRODUCTION	1
1.1 Background of the Project	1
1.2 Objectives of the Project	2
1.3 Scope of the Project	2
II. THE EXISTING SYSTEM	3
2.1 Background of the Organization	3
2.2 Area under Study	4
2.3 Existing Business Functions	4
2.4 Problems and Areas for Improvement	5
2.5 Information Requirements	6
III. THE PROPOSED SYSTEM	7
3.1 User Requirements	7
3.2 System Design	8
3.3 Database Design	76
3.4 Hardware and Software Requirements	80
3.5 Security and Control	82
3.6 System Cost Analysis	82
3.7 Benefit Analysis	86

<u>Chapter</u>	<u>Page</u>
3.8 Payback Analysis	86
IV. PROJECT IMPLEMENTATION	90
4.1 System Testing	90
4.2 User Training	91
V. CONCLUSIONS AND RECOMMENDATIONS	93
5.1 Conclusions	93
5.2 Recommendations	94
APPENDIX A USER INTERFACE DESIGN	95
APPENDIX B REPORT DESIGN	105
APPENDIX C DATABASE DESIGN	110
APPENDIX D DATA DICTIONARY	114
BIBLIOGRAPHY	125

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
2.1 Organization Chart of Ticon Public Company Limited	3
3.1 Functional Decomposition Diagram	10
3.2 Context Diagram	11
3.3 Data Flow Diagram Level 1	12
3.4 Data Flow Diagram Level 2 – Accounts Payable Subsystem	13
3.5 Data Flow Diagram Level 2 – Accounts Payable Subsystem (Continued)	14
3.6 Data Flow Diagram Level 2 – Payment Subsystem	15
3.7 Data Flow Diagram Level 2 – Construction Cost Subsystem	16
3.8 Data Flow Diagram Level 2 – Report Subsystem	17
3.9 Data Flow Diagram Level 2 – Report Subsystem (Continued)	18
3.10 Data Architecture Diagram – Accounts Payable Subsystem	19
3.11 Data Architecture Diagram – Process Add Accounts Payable of Accounts Payable Subsystem	20
3.12 Data Architecture Diagram – Process Update Accounts Payable of Accounts Payable Subsystem	21
3.13 Data Architecture Diagram – Process Delete Accounts Payable of Accounts Payable Subsystem	21
3.14 Data Architecture Diagram – Process Block Accounts Payable of Accounts Payable Subsystem	22
3.15 Data Architecture Diagram – Payment Subsystem	22
3.16 Data Architecture Diagram – Process Generate Payment Proposal of Payment Subsystem	23
3.17 Data Architecture Diagram – Process Block Payment of Payment Subsystem	23

<u>Figure</u>	<u>Page</u>
3.18 Data Architecture Diagram – Process Approve Payment of Payment Subsystem	24
3.19 Data Architecture Diagram – Construction Cost Subsystem	25
3.20 Data Architecture Diagram – Process Add Construction Cost of Construction Cost Subsystem	26
3.21 Data Architecture Diagram – Process Update Construction Cost of Construction Cost Subsystem	26
3.22 Data Architecture Diagram – Process Delete Construction Cost of Construction Cost Subsystem	27
3.23 Data Architecture Diagram – Report Subsystem	28
3.24 Data Architecture Diagram – Process Generate Daily Summary of Construction Cost Report of Report Subsystem	29
3.25 Data Architecture Diagram – Process Generate Weekly Summary of Payment Proposal Report of Report Subsystem	29
3.26 Data Architecture Diagram – Process Generate Weekly Summary of Blocked Payment Report of Report Subsystem	30
3.27 Data Architecture Diagram – Process Generate Weekly Summary of Blocked Invoice Report of Report Subsystem	30
3.28 Data Architecture Diagram – Process Generate Monthly Summary of Outstanding Invoice Report of Report Subsystem	31
3.29 Process Architecture Diagram	32
3.30 Interface Architecture Diagram – Accounts Payable Subsystem	33
3.31 Interface Architecture Diagram – Process Add Accounts Payable of Accounts Payable Subsystem	34
3.32 Interface Architecture Diagram – Process Update Accounts Payable of Accounts Payable Subsystem	35
3.33 Interface Architecture Diagram – Process Delete Accounts Payable of Accounts Payable Subsystem	35
3.34 Interface Architecture Diagram – Process Block Accounts Payable of Accounts Payable Subsystem	36

<u>Figure</u>	<u>Page</u>
3.35 Interface Architecture Diagram – Payment Subsystem	37
3.36 Interface Architecture Diagram – Process Generate Payment Proposal of Payment Subsystem	38
3.37 Interface Architecture Diagram – Process Block Payment of Payment Subsystem	38
3.38 Interface Architecture Diagram – Process Approve Payment of Payment Subsystem	39
3.39 Interface Architecture Diagram – Construction Cost Subsystem	40
3.40 Interface Architecture Diagram – Process Add Construction Cost of Construction Cost Subsystem	41
3.41 Interface Architecture Diagram – Process Update Construction Cost of Construction Cost Subsystem	41
3.42 Interface Architecture Diagram – Process Delete Construction Cost of Construction Cost Subsystem	42
3.43 Interface Architecture Diagram – Report Subsystem	43
3.44 Interface Architecture Diagram – Process Generate Daily Summary of Construction Cost Report of Report Subsystem	44
3.45 Interface Architecture Diagram – Process Generate Weekly Summary of Payment Proposal Report of Report Subsystem	44
3.46 Interface Architecture Diagram – Process Generate Weekly Summary of Blocked Payment Report of Report Subsystem	45
3.47 Interface Architecture Diagram – Process Generate Weekly Summary of Blocked Invoice Report of Report Subsystem	45
3.48 Interface Architecture Diagram – Process Generate Monthly Summary of Outstanding Invoice Report of Report Subsystem	46
3.49 Physical Data Flow Diagram – Accounts Payable Subsystem	47
3.50 Physical Dataflow Diagram – Process Add Accounts Payable of Accounts Payable Subsystem	48
3.51 Physical Dataflow Diagram – Process Update Accounts Payable of Accounts Payable Subsystem	49

<u>Figure</u>	<u>Page</u>
3.52 Physical Dataflow Diagram – Process Delete Accounts Payable of Accounts Payable Subsystem	49
3.53 Physical Dataflow Diagram – Process Block Accounts Payable of Accounts Payable Subsystem	50
3.54 Physical Dataflow Diagram – Payment Subsystem	51
3.55 Physical Dataflow Diagram – Process Generate Payment Proposal of Payment Subsystem	52
3.56 Physical Dataflow Diagram – Process Block Payment of Payment Subsystem	52
3.57 Physical Dataflow Diagram – Process Approve Payment of Payment Subsystem	53
3.58 Physical Dataflow Diagram – Construction Cost Subsystem	54
3.59 Physical Dataflow Diagram – Process Add Construction Cost of Construction Cost Subsystem	55
3.60 Physical Dataflow Diagram – Process Update Construction Cost of Construction Cost Subsystem	55
3.61 Physical Dataflow Diagram – Process Delete Construction Cost of Construction Cost Subsystem	56
3.62 Physical Dataflow Diagram – Report Subsystem	57
3.63 Physical Dataflow Diagram – Process Generate Daily Summary of Construction Cost Report of Report Subsystem	58
3.64 Physical Dataflow Diagram – Process Generate Weekly Summary of Payment Proposal Report of Report Subsystem	58
3.65 Physical Dataflow Diagram – Process Generate Weekly Summary of Blocked Payment Report of Report Subsystem	59
3.66 Physical Dataflow Diagram – Process Generate Weekly Summary of Blocked Invoice Report of Report Subsystem	59
3.67 Physical Dataflow Diagram – Process Generate Monthly Summary of Outstanding Invoice Report of Report Subsystem	60

<u>Figure</u>	<u>Page</u>
3.68 Structure Chart – Process Add Accounts Payable of Supplier Subsystem	61
3.69 Structure Chart – Process Update Accounts Payable of Accounts Payable Subsystem	62
3.70 Structure Chart – Process Delete Accounts Payable of Accounts Payable Subsystem	63
3.71 Structure Chart – Process Block Accounts Payable of Accounts Payable Subsystem	64
3.72 Structure Chart – Process Generate Payment Proposal of Payment Subsystem	65
3.73 Structure Chart – Process Block Payment of Payment Subsystem	66
3.74 Structure Chart – Process Approve Payment of Payment Subsystem	67
3.75 Structure Chart – Process Add Construction Cost of Construction Cost Subsystem	68
3.76 Structure Chart – Process Update Construction Cost of Construction Cost Subsystem	69
3.77 Structure Chart – Process Delete Construction Cost of Construction Cost Subsystem	70
3.78 Structure Chart – Process Generate Daily Summary of Construction Cost Report of Report Subsystem	71
3.79 Structure Chart – Process Generate Weekly Summary of Payment Proposal Report of Report Subsystem	72
3.80 Structure Chart – Process Generate Weekly Summary of Blocked Payment Report of Report Subsystem	73
3.81 Structure Chart – Process Generate Weekly Summary of Blocked Invoice Report of Report Subsystem	74
3.82 Structure Chart – Process Generate Monthly Summary of Outstanding Invoice Report of Report Subsystem	75

<u>Figure</u>	<u>Page</u>
3.83 Database Schema	77
3.84 Key-Based Database Diagram	78
3.85 Attribute Database Diagram	79
3.86 Network Infrastructure of the Proposed System	81
3.87 Payback Analysis Chart	88
3.88 Breakeven Analysis Chart	89
4.1 Project Implementation Schedule	92
A.1 User Login Screen	95
A.2 Main Menu	96
A.3 Accounts Payable Screen	97
A.4 Payment Menu	98
A.5 Payment Proposal Screen	99
A.6 Maintain Payment Screen	100
A.7 Construction Cost Menu	101
A.8 Run Construction Cost Screen	102
A.9 Maintain Cost Screen	103
A.10 Report Menu	104
B.1 Daily Summary of Construction Cost Report	105
B.2 Weekly Summary of Payment Proposal Report	106
B.3 Weekly Summary of Blocked Payment Report	107
B.4 Weekly Summary of Blocked Invoice Report	108
B.5 Monthly Summary of Outstanding Invoice by Vendor Report	109
C.1 Microsoft Access Database Design	110
C.2 Microsoft Access – Accounts Payable Table Properties	111

<u>Figure</u>	<u>Page</u>
C.3 Microsoft Access – Payment Table Properties	112
C.4 Microsoft Access – Construction Cost Table Properties	113



LIST OF TABLES

<u>Table</u>	<u>Page</u>
3.1 Hardware and Software Specification	80
3.2 Cost Analysis of Manual System	83
3.3 Cost Analysis of Computerized System	84
3.4 Accumulated Cost of Manual and Computerized System	85
3.5 Comparison of the System Cost	87
5.1 The Degree of Achievement of the Proposed System	94



I. INTRODUCTION

1.1 Background of the Project

Ticon Public Company Limited is a joint venture established in 1990 between Siam Venture B. V, Asia Sermkit Co., Ltd., ABN AMRO Asia Securities Public Co., Ltd., and four other entities. Ticon aims to facilitate the construction and financing of high quality factories for sales or lease.

Presently, accounts payable system and payment to vendors are based on manual system. There are many problems occurred in the existing operation including accounts payable and payment data are lost, out-date and inaccurate, payment to vendor is done overdue or before due, lack of information to manage cash flow, etc.

The computerized system then has been proposed to improve and solve the problems in existing operations. In addition, the system should provide information to support decision-making by middle management and top management. The new system should also reduce operation time, provide better security and enable the staffs to perform their functions effectively and efficiently.

1.2 Objectives of the Project

The objectives of this project are as follows:

- (1) To analyze the existing system to understand problems and requirements.
- (2) To study the requirements of users and design computer information system according to these users' requirements.
- (3) To design a computer-based system which is suitable and create outputs that support operation and management.
- (4) To improve the operation by using computer based information system.
- (5) To produce the reports that provides reliable information on timely basis.

- (6) To reduce cost of operation.

1.3 Scope of the Project

Accounts Payable System will develop to cover the functions as follows:

- (1) Consider only the departments involved in accounts payable, which are Purchasing, Project, Accounting and Finance department.
- (2) Aim to improve the company's work process in producing a various kinds of reports and information processing.
- (3) The main purpose of the proposed system is about the accounts payable system, so it will include management of accounts payable information and payment to vendors.



II. THE EXISTING SYSTEM

2.1 Background of the Organization

Ticon Public Company Limited was located at 5/595 Pakret, Nontaburi. The organizational of Ticon Public Company Limited consists of five main departments as follows:

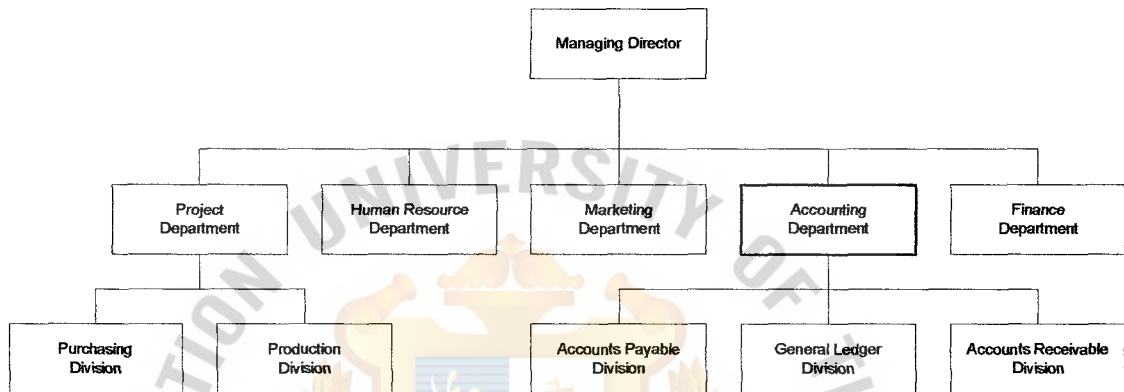


Figure 2.1. Organization Chart of Ticon Public Company Limited.

(1) Project Department

The main responsibility is provided the construction material for supporting the construction work. They control the construction work follow the schedule and the budget of construction cost of each project.

(2) Human Resource Department

The department is responsible for human resources such as recruiting, training, etc. The department also handles payroll functions.

(3) Marketing Department

The department handles all of rental contract from customers and liaisons with the government section for service to the customer.

(4) Accounting Department

The department deals with all jobs for general accounting such as record accounting transactions, prepare company financial statements, etc.

(5) Finance Department

The department deals with the financial section of company. They have to manage cash in and cash out of the company. The section works closely with the accounting department.

2.2 Area under Study

This project will cover purchasing functions under the Administration Department. The study of existing operations will be done at Purchasing division including business workflows between Purchasing division and other divisions in the company such as Warehouse and Accounting division. This information will help to develop the computerized purchasing system.

2.3 Existing Business Functions

The accounts payable functions are all performed manually starting from receiving purchase orders from purchasing division and invoice from vendors, recording accounts payable and payment to vendors. Upon receiving purchase order from purchasing division, the accounts payable staff will maintain the document in a folder and wait for matching with vendor's invoice.

Vendor will deliver the ordered inventory to the site where construction work is proceeding. Staffs at the construction site will check the inventory received, once accuracy, they will sign on the delivery document and send to accounting department.

Once receiving vendor's invoice, the account payable staff will find a matched purchase order, delivery document and check the accuracy of the orders including inventory, quantity and price. Only the accurate invoice will be accepted and recorded

accounts payable and construction cost. Accounts payable staff will attach vendor invoice with purchase order in a separate folder sorted by vendor and due date.

Everyday accounts payable staff will review the vendor invoice folder and prepare payment report for those invoice which will be dued in the next seven days. This payment report will send to Finance department in order to prepare cheque for vendors. Additionally, accounts payable staff have to prepare construction cost control report and submit to project department. The project department will use the report to monitor and control cost of construction for each project.

After cheque is sent to vendor, Finance department will also send report and a copy of cheque back to Accounts payable division for filing and stamp paid on invoice. Those vendor invoices which are already paid will be moved from the folder to maintain in a paid folder.

Each month accounts payable staff will prepare a summary of accounts payable information and submit to General Ledger division in order to record accounts payable in General Ledger system.

2.4 Problems and Areas for Improvement

In the study of existing business, it was found that many problems have occurred as follows:

- (1) Accounts payable data are lost, inaccurate and are not up-to-date.
- (2) Payment data are lost, inaccurate and are not up-to-date.
- (3) Payment to vendors cannot manage in according to the due date.
- (4) Staff takes much time to prepare reports for management and other departments.
- (5) Lack of information to support daily operation.
- (6) Lack of information to manage company cash flow.

(7) Lack of information to support management decision-making.

In order to solve the above mentioned problems, a computerized system is developed to improve the accounts payable functions. There are many benefits derived from the computerized system such as accounts payable data can be recorded and updated online, payment to vendors are always authorized, reports are generated by the system. This improves and increases the effectiveness and efficiency in accounts payable function.

2.5 Information Requirements

Several tools are used to define information requirements in the business, including sampling and investigating data, observing the actual operations, interviewing key personnel, and questionnaire.

It is necessary to understand what information users need to perform their jobs and achieve the goals or objectives of study. In order to get the information requirements for this project the Accounting manager of Ticon Public Company Limited and key accounting personnel were interviewed which includes observing the actual operations.

The requirement of the Accounting manager is to improve the operations, resolve the current problems as much as possible.

III. THE PROPOSED SYSTEM

3.1 User Requirements

In order to design a proper system that are satisfy and support user requirements, the proposed system have to achieve the following requirements:

- (1) Allow online maintenance of accounts payable and payment data.
- (2) Retrieve vendor and purchase order information from purchasing system.
- (3) Send accounts payable information to general ledger system.
- (4) Staff can obtain required information from the system at anytime.
- (5) Control the accuracy and redundancy of operations.
- (6) Check errors occurred during the operation of program.
- (7) Provide user-friendly interfaced and easy to use.
- (8) Share information over all business units.
- (9) Produce reports as preferred by daily operation, management and other related departments.
- (10) Provide security as identify user's access authority and allow only authorized persons to perform only their jobs.

The input and output are determined as follows:

Input requirements:

- (1) Vendor Information
- (2) Purchase order information.
- (3) Inventory receiving information.
- (4) Vendor invoice information.
- (5) Debit note information.
- (6) Credit note information.

- (7) Cheque payment information.

Output requirements:

- (1) Accounts payable information.
- (2) Daily summary of construction cost information.
- (3) Weekly summary of payment proposal information.
- (4) Weekly summary of blocked invoice information.
- (5) Weekly summary of payment blocked information.
- (6) Monthly summary of outstanding invoice by vendor.

3.2 System Design

3.2.1 Process Required in the Proposed System

The new computerized system consisted of seven subsystems as follows:

- (1) Accounts payable subsystem.
- (2) Payment subsystem.
- (3) Construction cost subsystem.
- (4) Report subsystem.

The accounts payable subsystem can be divided into the following processes:

- (1) Add accounts payable information process.
- (2) Update accounts payable information process.
- (3) Delete accounts payable information process.
- (4) Block accounts payable information process.

The payment subsystem can be divided into the following processes:

- (1) Generate payment proposal process.
- (2) Block payment information process.
- (3) Approve payment information process.

The construction cost subsystem can be divided into the following processes:

- (1) Add construction cost information process.
- (2) Update construction cost information process.
- (3) Delete construction cost information process.

The report subsystem can be divided into the following processes:

- (1) Generate daily summary of construction cost report process.
- (2) Generate weekly summary of payment proposal report process.
- (3) Generate weekly summary of blocked invoice report process.
- (4) Generate weekly summary of blocked payment report process.
- (5) Generate monthly summary of outstanding invoice by vendor report process.

3.2.2 Data Flow Diagram

Data flow diagram for the new computerized system are as follows:



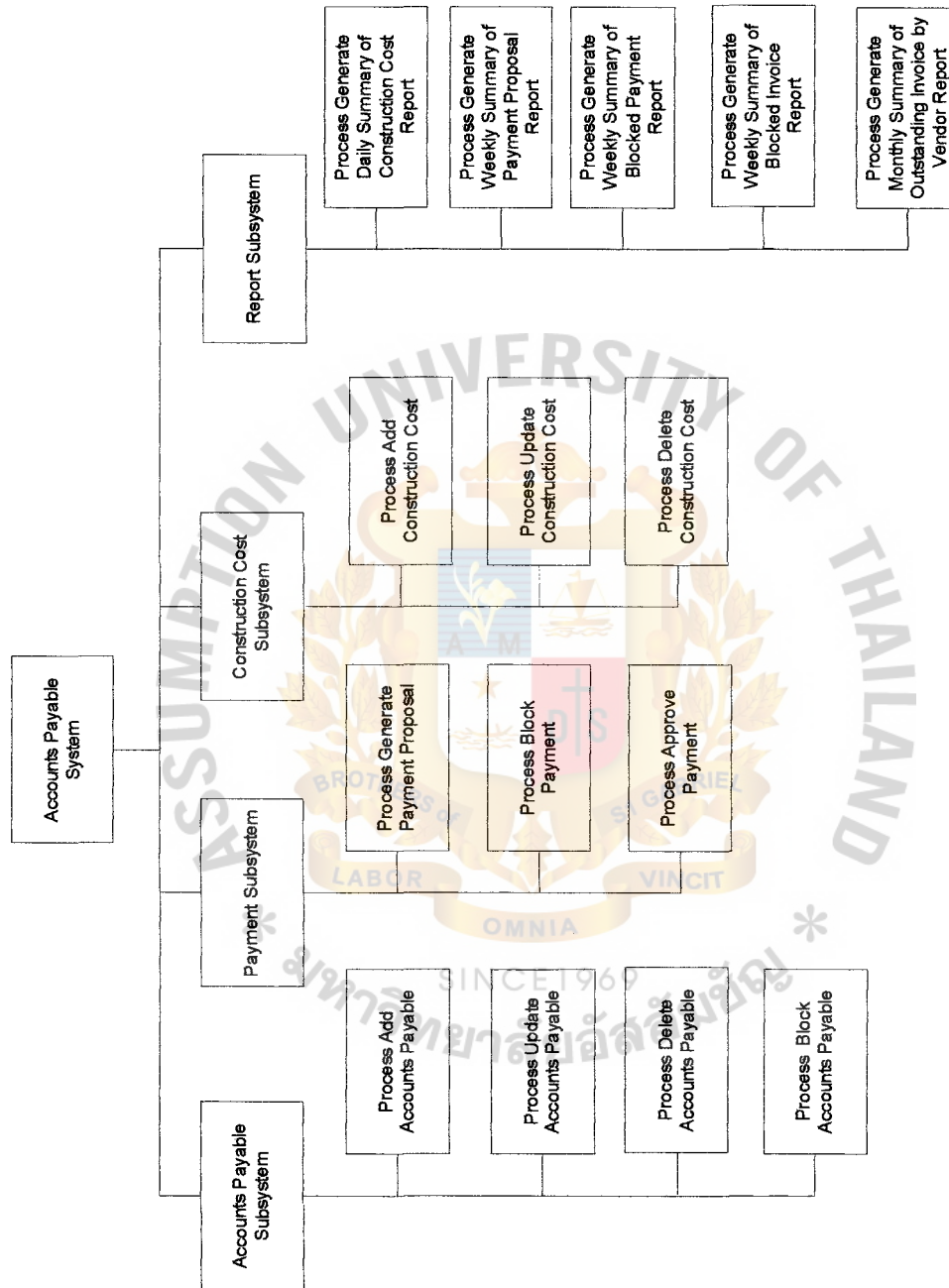


Figure 3.1. Functional Decomposition Diagram.

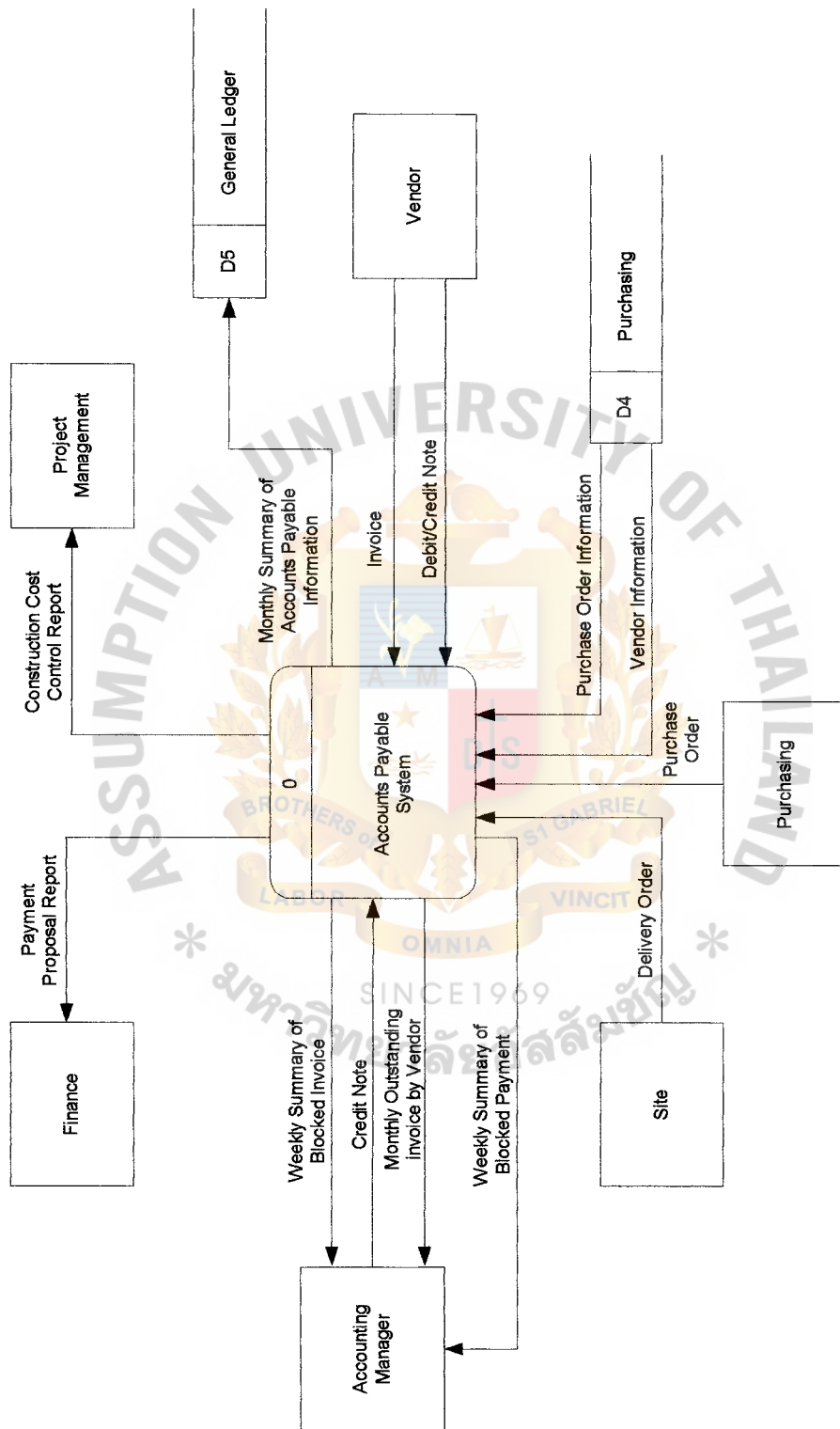


Figure 3.2. Context Diagram.

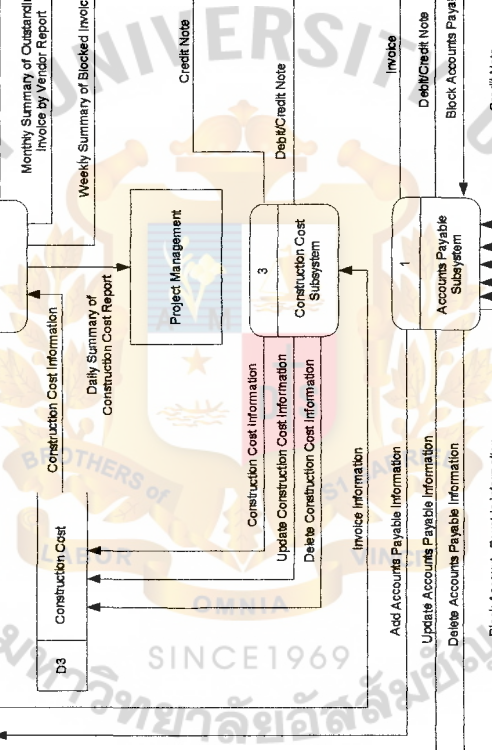


Figure 3.3. Data Flow Diagram Level 1.

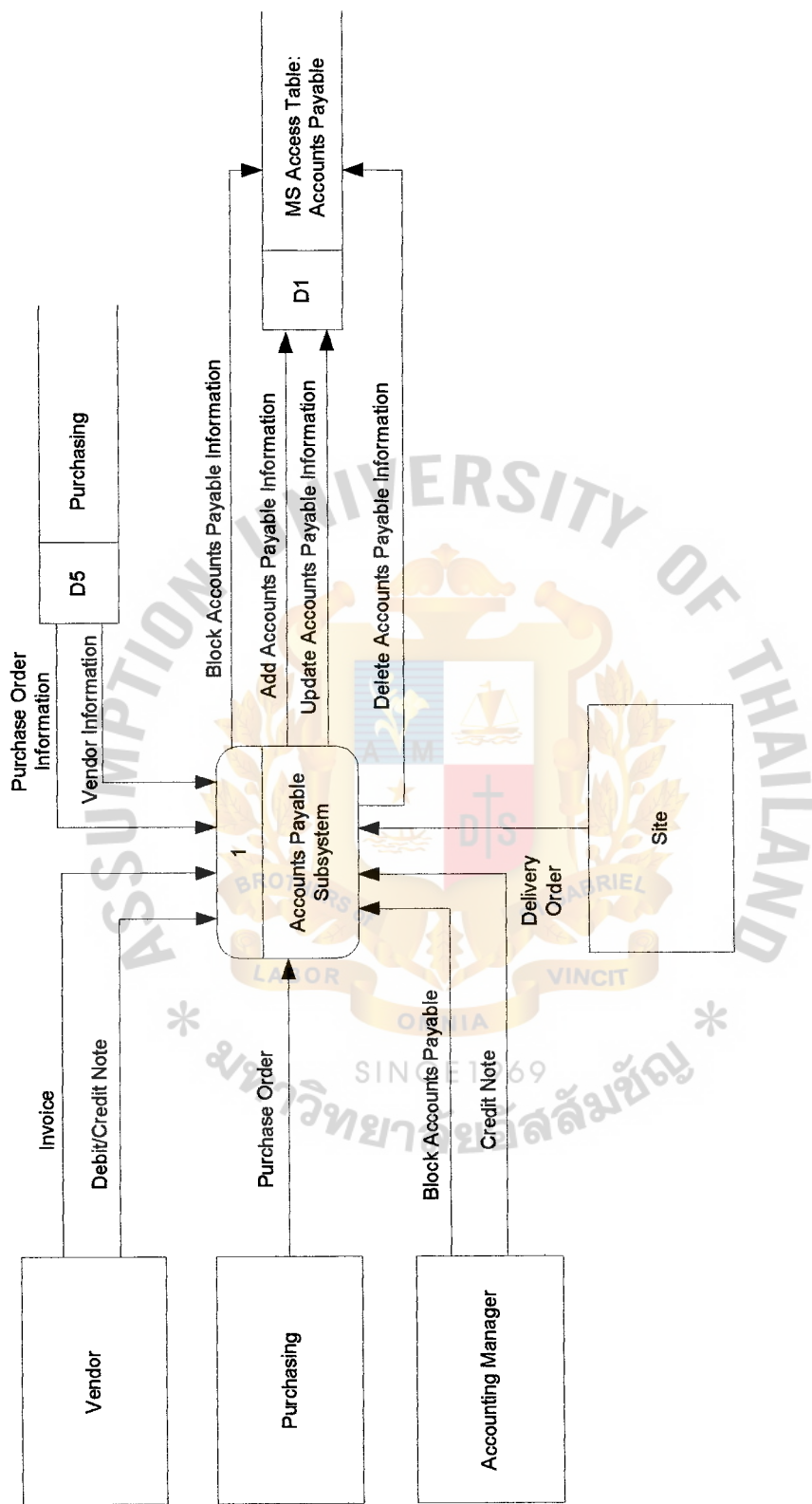


Figure 3.4. Data Flow Diagram Level 2 – Accounts Payable Subsystem.

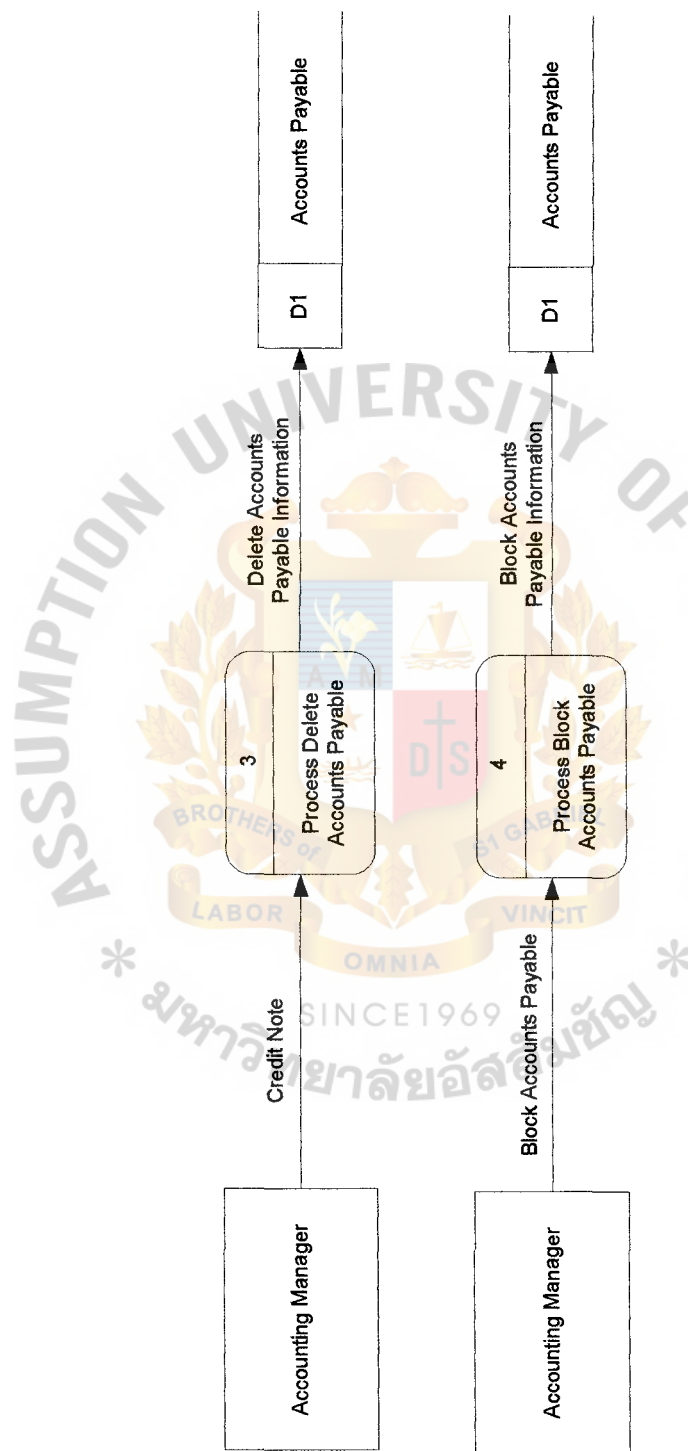


Figure 3.5. Data Flow Diagram Level 2 – Accounts Payable Subsystem (Continued).

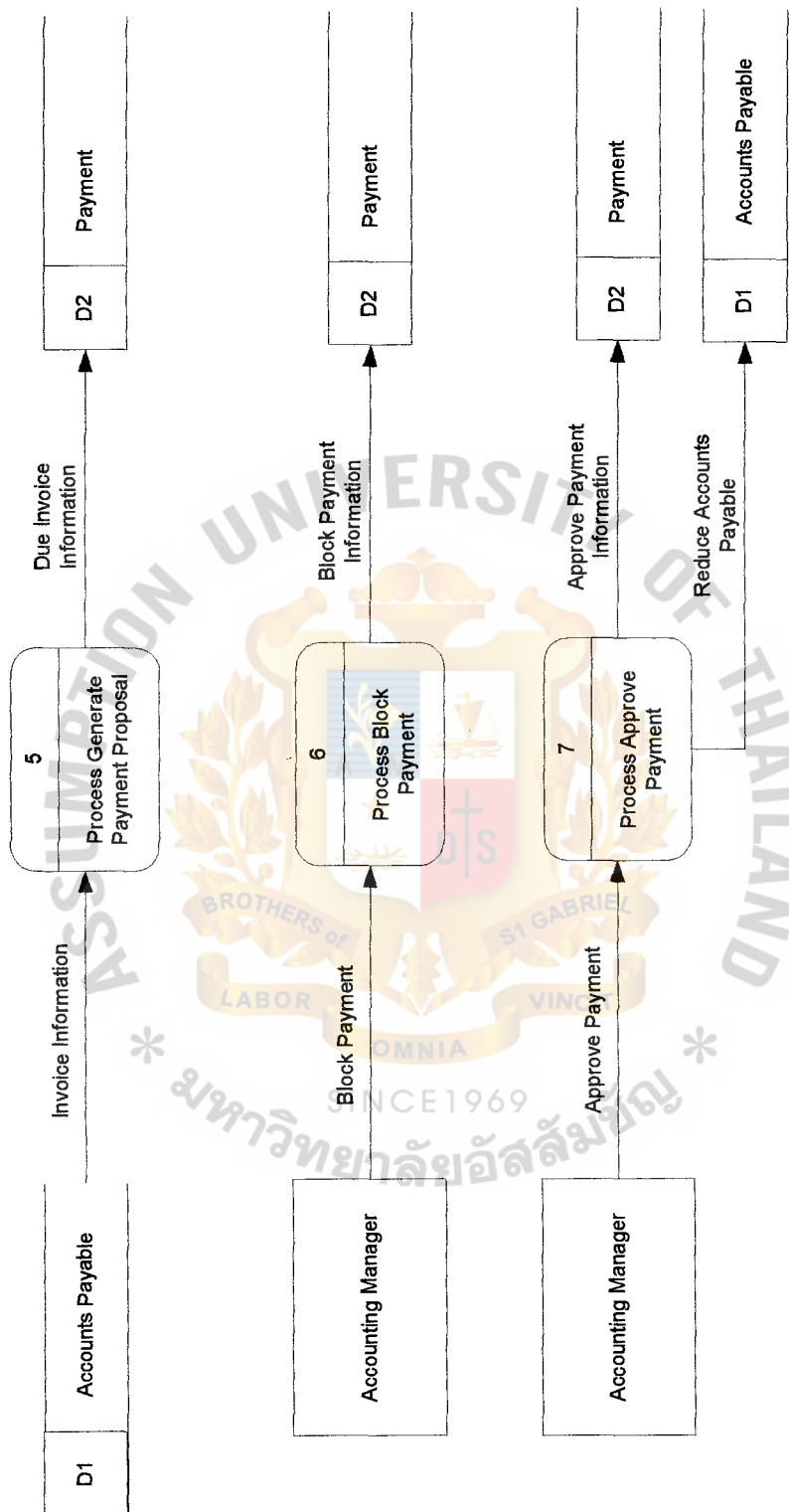


Figure 3.6. Data Flow Diagram Level 2 – Payment Subsystem.

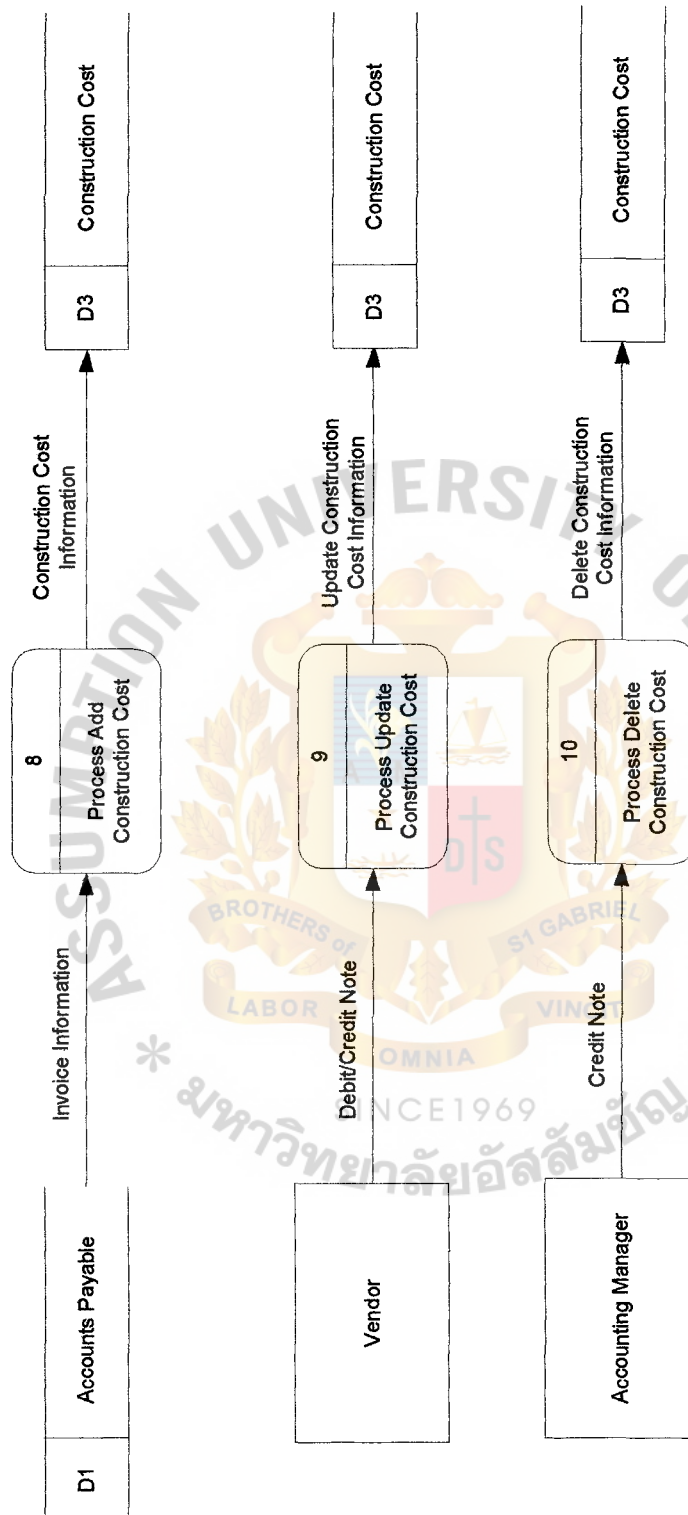


Figure 3.7. Data Flow Diagram Level 2 – Construction Cost Subsystem.

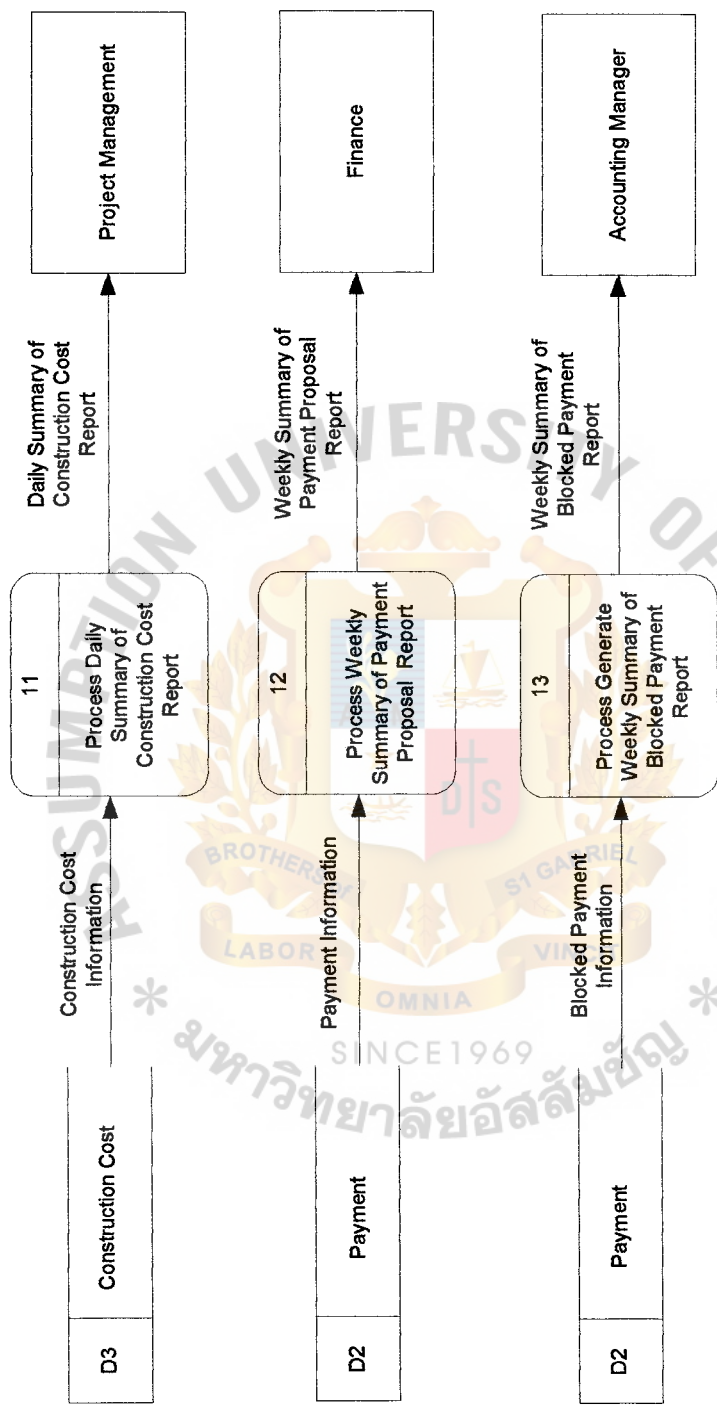


Figure 3.8. Data Flow Diagram Level 2 – Report Subsystem.

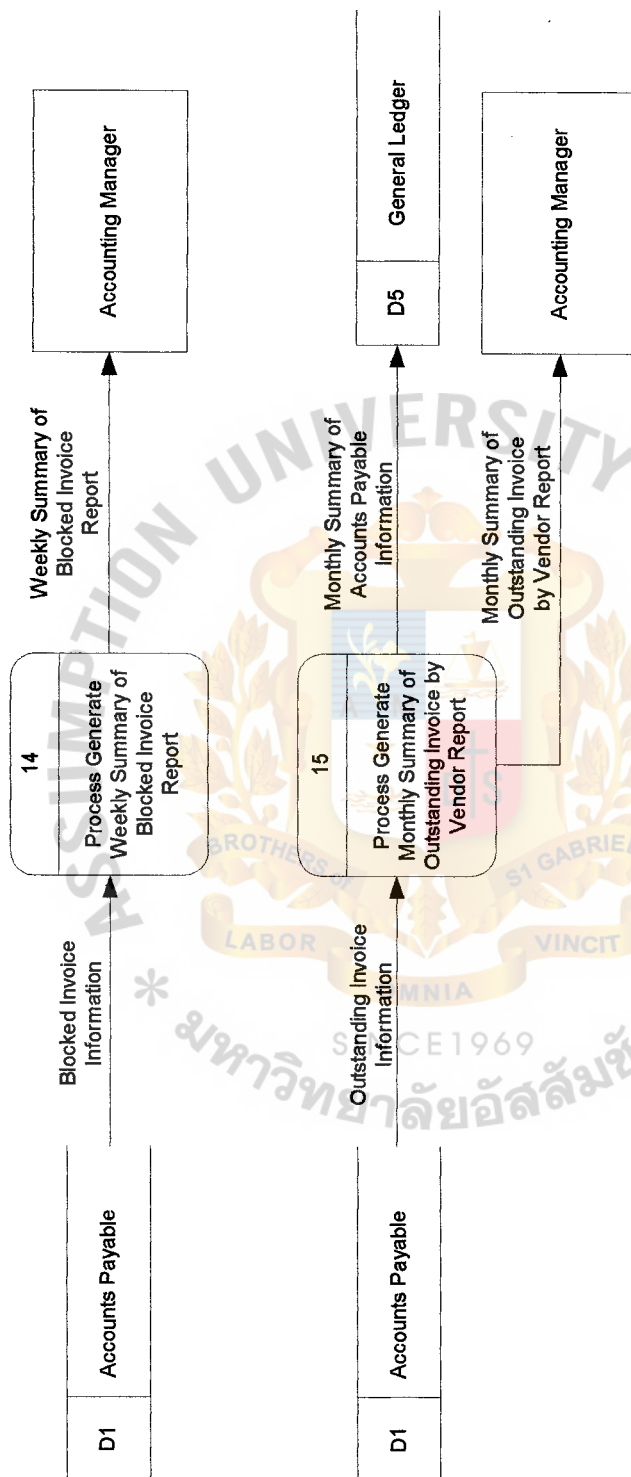


Figure 3.9. Data Flow Diagram Level 2 – Report Subsystem (Continued).

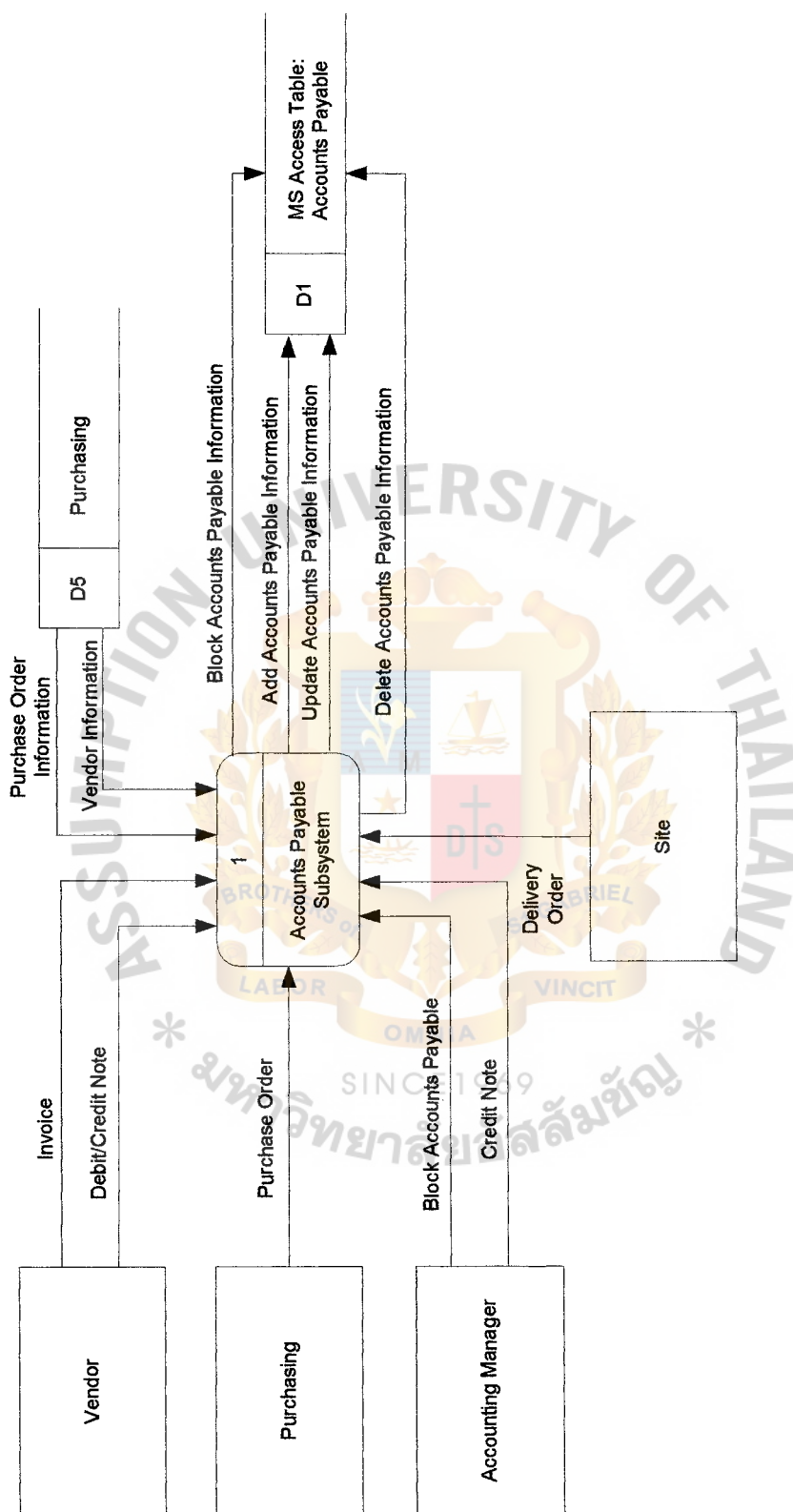


Figure 3.10. Data Architecture Diagram – Accounts Payable Subsystem.

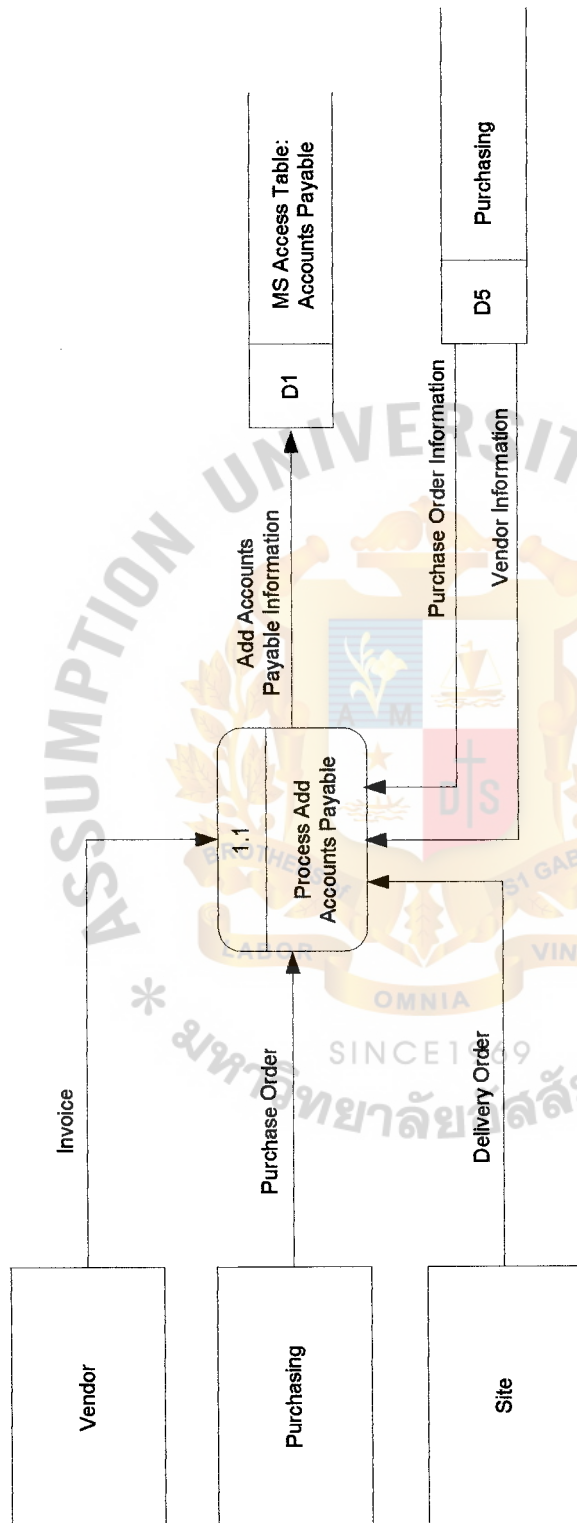


Figure 3.11. Data Architecture Diagram – Process Add Accounts Payable of Accounts Payable Subsystem.



Figure 3.12. Data Architecture Diagram – Process Update Accounts Payable of Accounts Payable Subsystem.



Figure 3.13. Data Architecture Diagram – Process Delete Accounts Payable of Accounts Payable Subsystem.

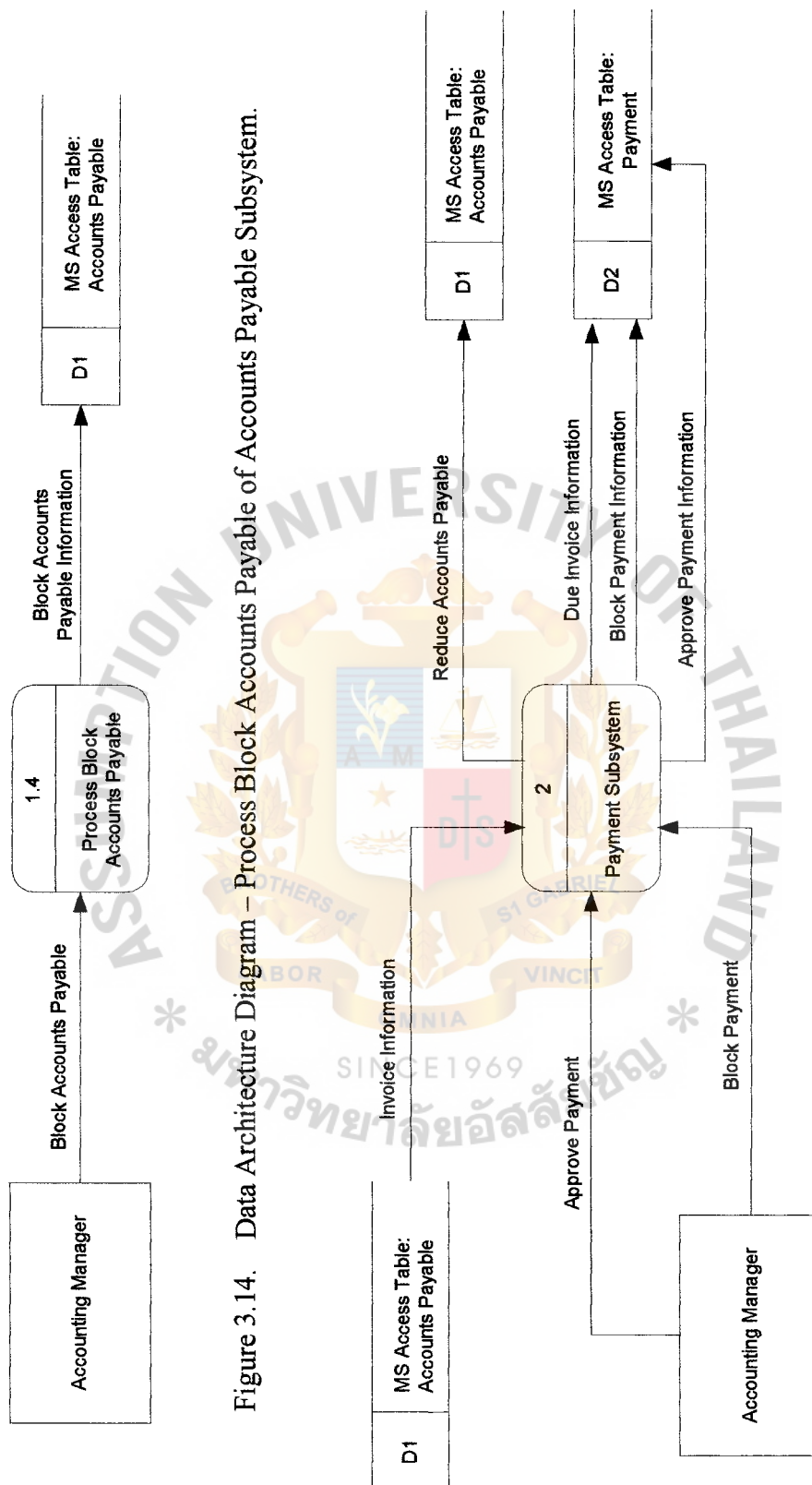


Figure 3.14. Data Architecture Diagram – Process Block Accounts Payable of Accounts Payable Subsystem.

Figure 3.15. Data Architecture Diagram – Payment Subsystem.

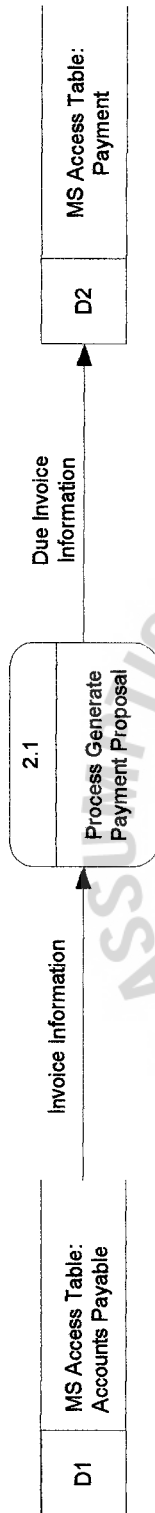


Figure 3.16. Data Architecture Diagram – Process Generate Payment Proposal of Payment Subsystem.



Figure 3.17. Data Architecture Diagram – Process Block Payment of Payment Subsystem.

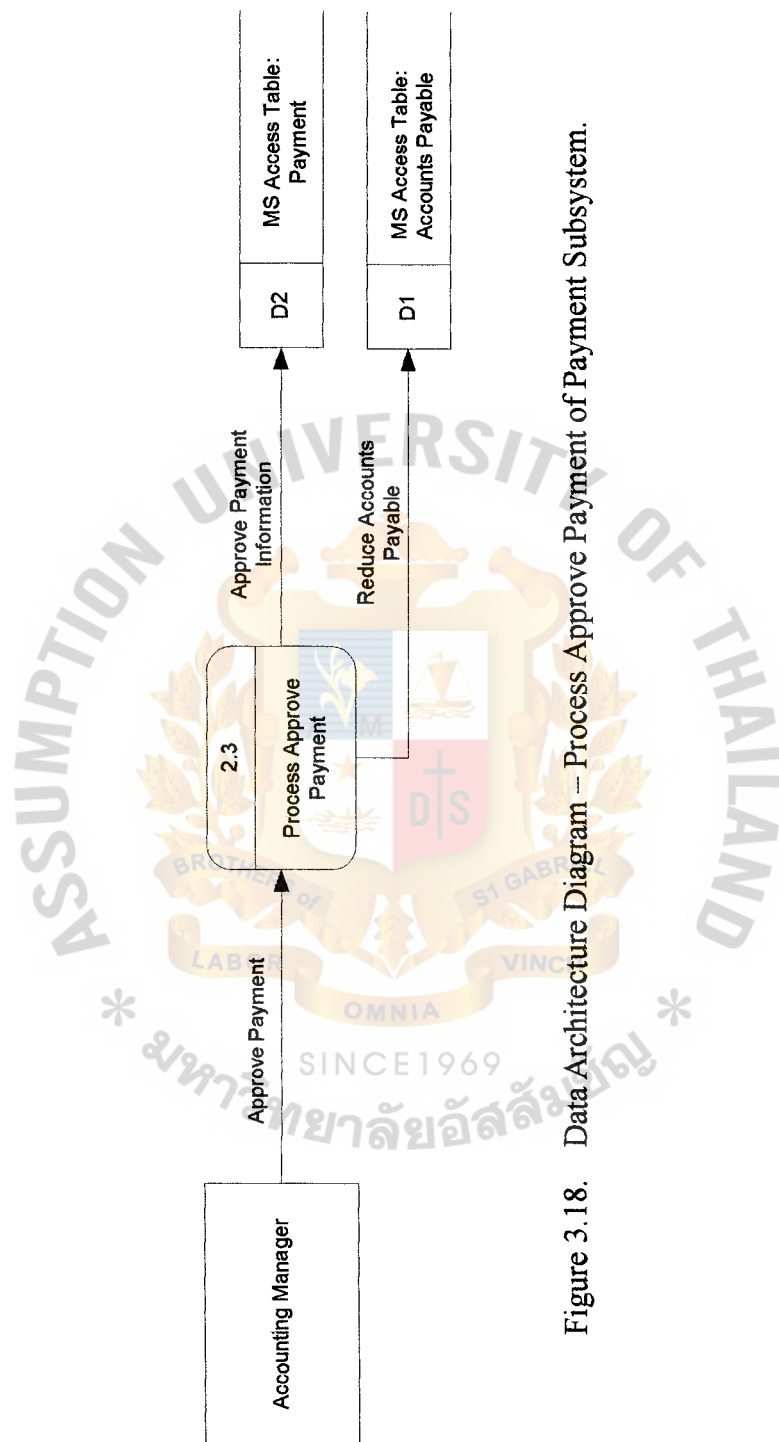


Figure 3.18. Data Architecture Diagram – Process Approve Payment of Payment Subsystem.

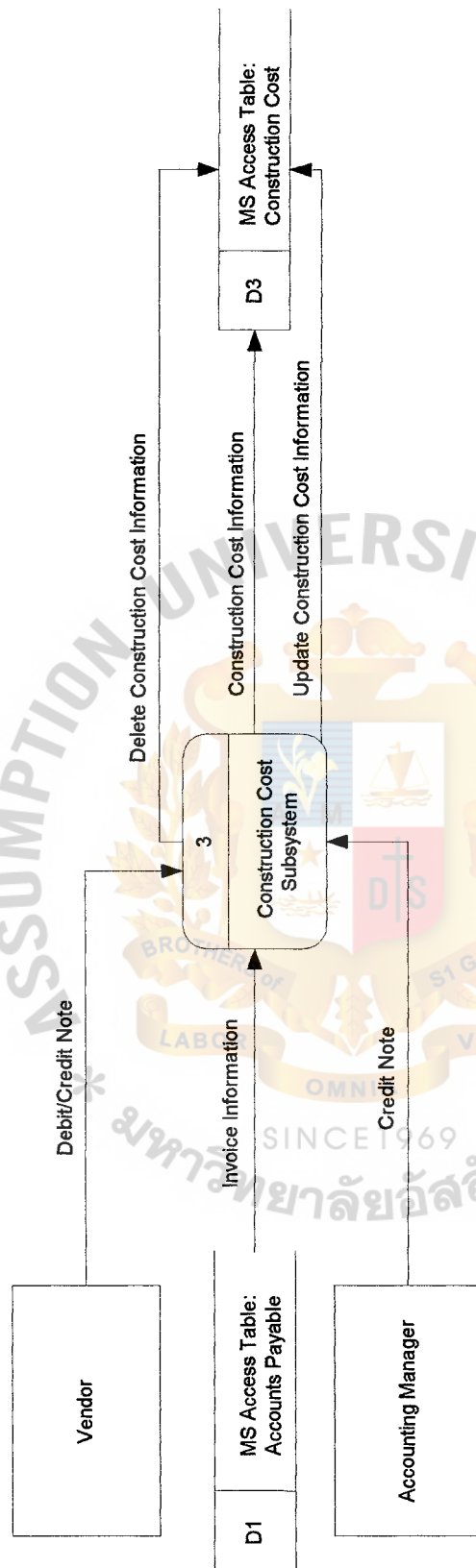


Figure 3.19. Data Architecture Diagram – Construction Cost Subsystem.

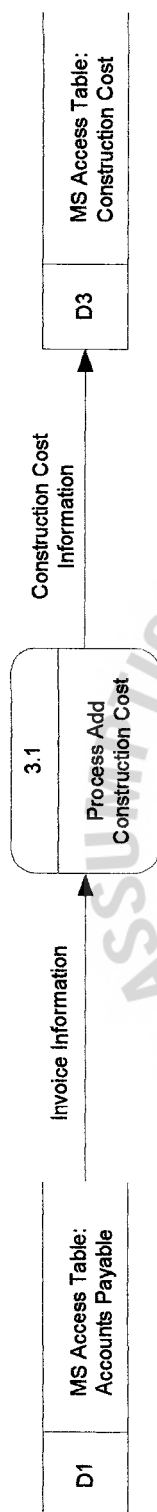


Figure 3.20. Data Architecture Diagram – Process Add Construction Cost of Construction Cost Subsystem.



Figure 3.21. Data Architecture Diagram – Process Update Construction Cost of Construction Cost Subsystem.

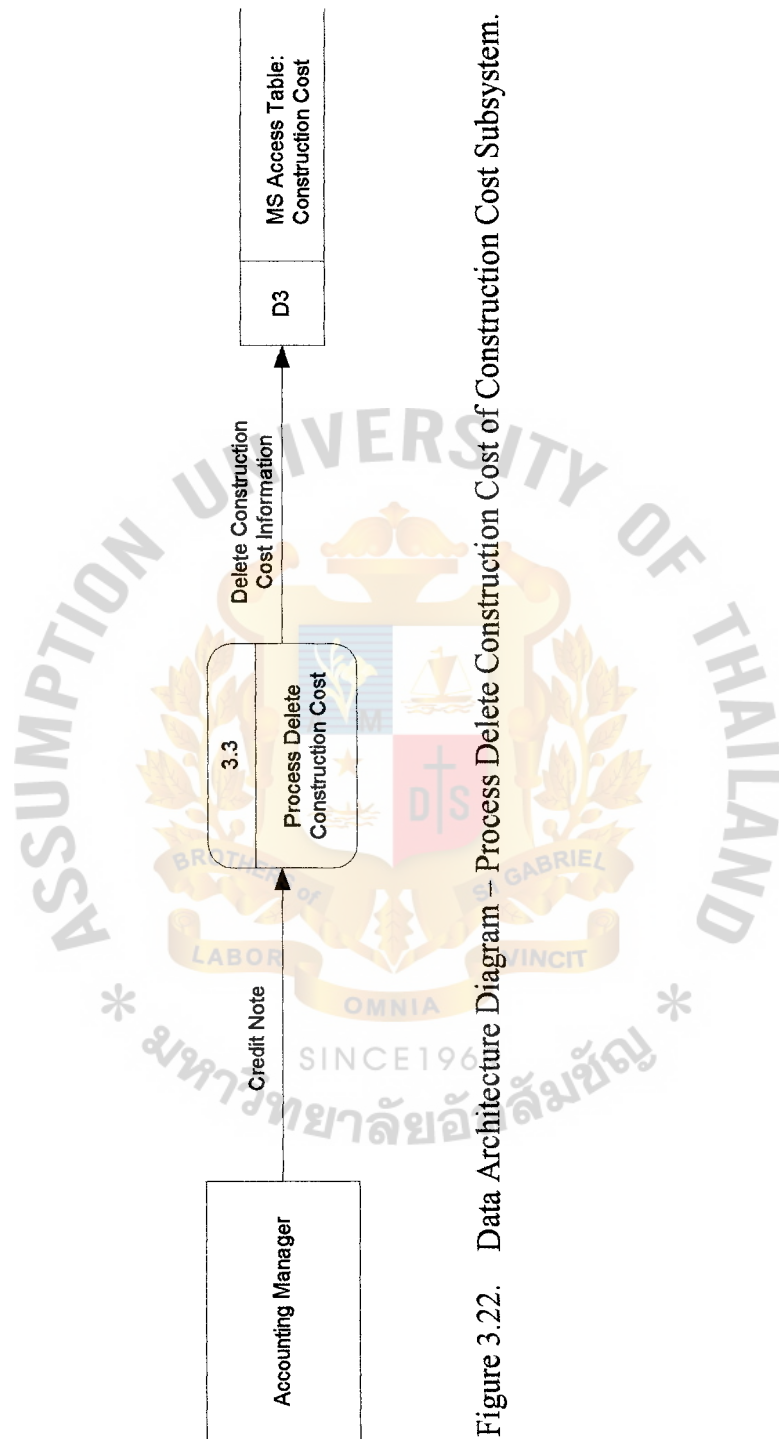


Figure 3.22. Data Architecture Diagram – Process Delete Construction Cost of Construction Cost Subsystem.

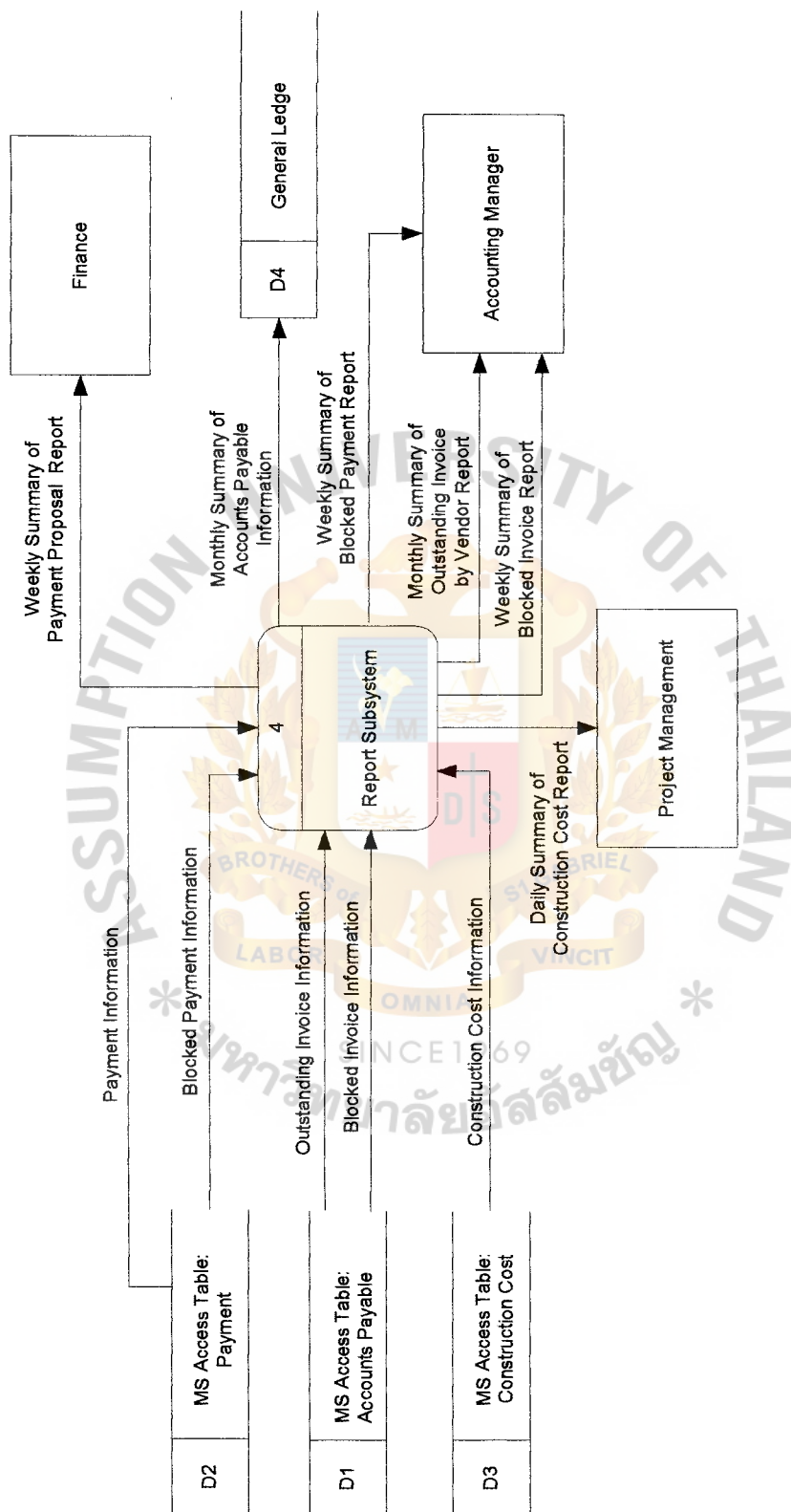


Figure 3.23. Data Architecture Diagram – Report Subsystem.

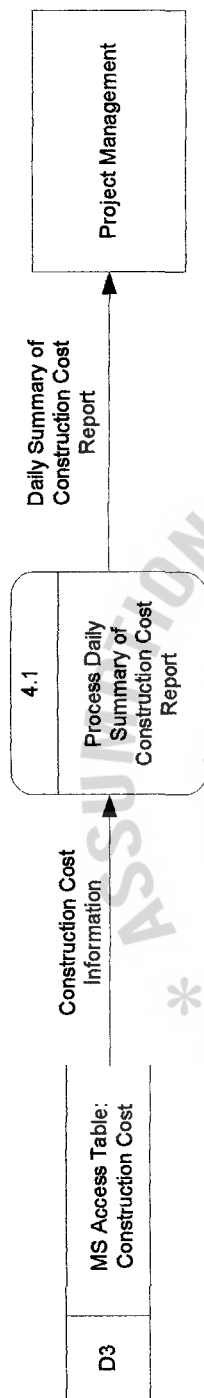


Figure 3.24. Data Architecture Diagram – Process Generate Daily Summary of Construction Cost Report of Report Subsystem.

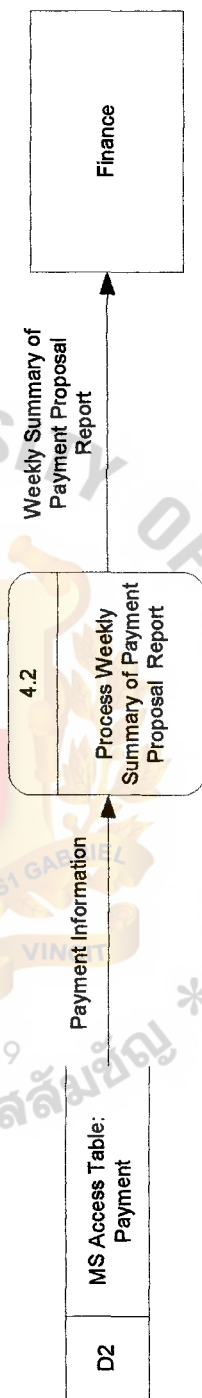


Figure 3.25. Data Architecture Diagram – Process Generate Weekly Summary of Payment Proposal Report of Report Subsystem.

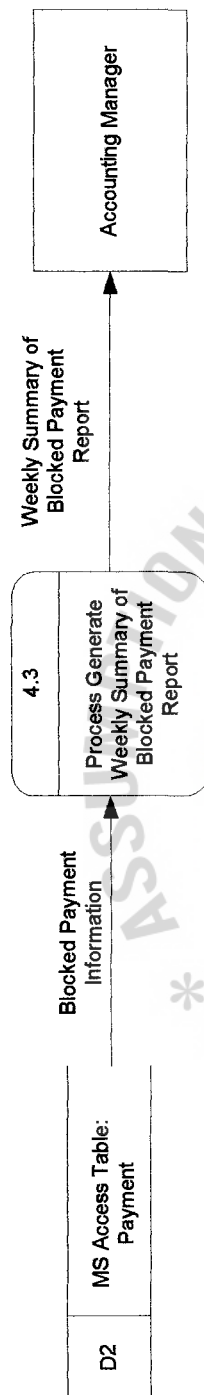


Figure 3.26. Data Architecture Diagram – Process Generate Weekly Summary of Blocked Payment Report of Report Subsystem.

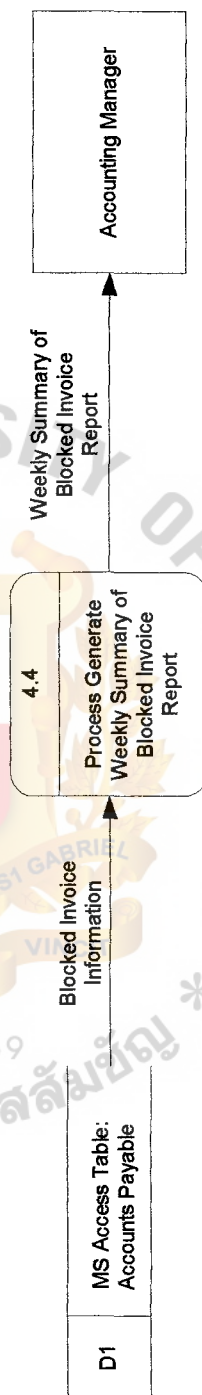


Figure 3.27. Data Architecture Diagram – Process Generate Weekly Summary of Blocked Invoice Report of Report Subsystem.

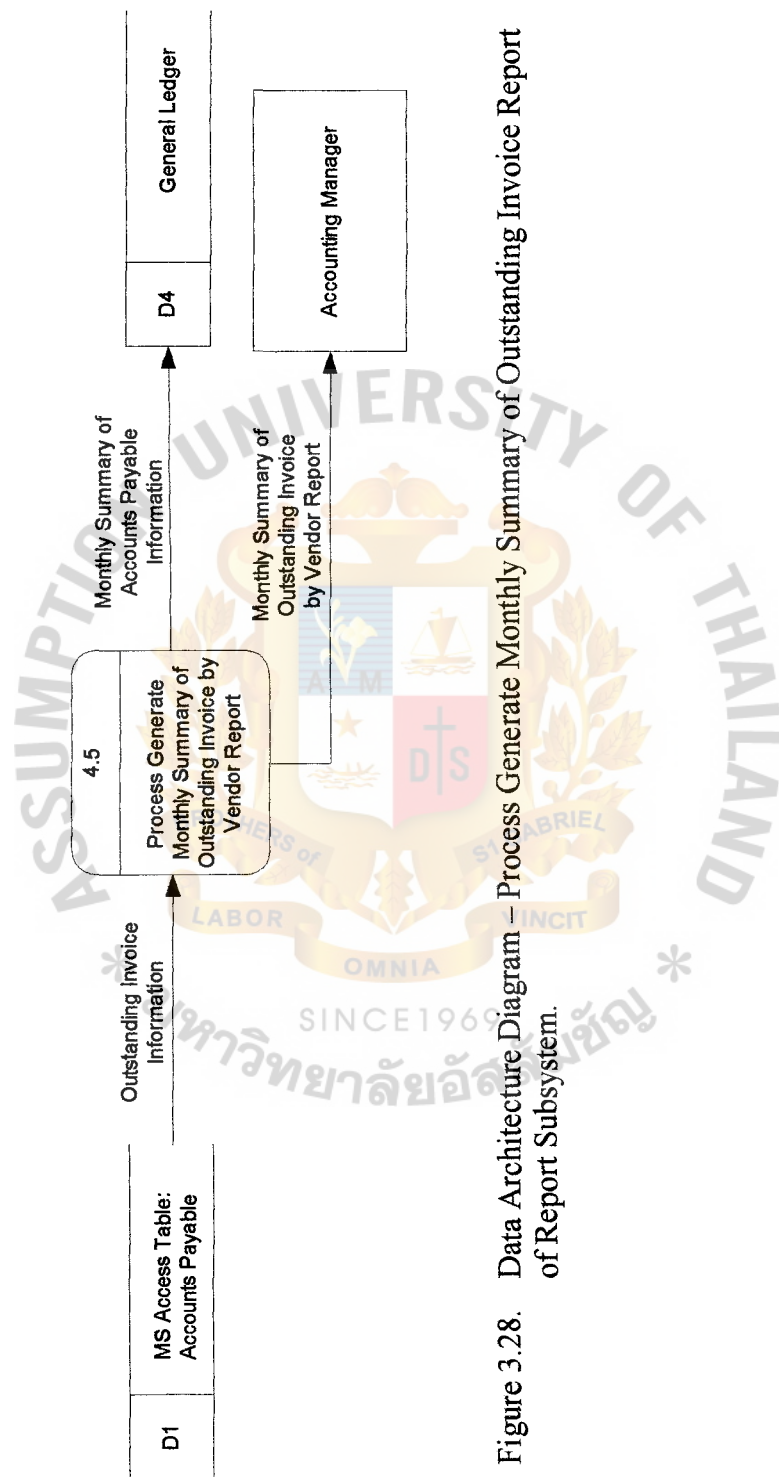


Figure 3.28. Data Architecture Diagram – Process Generate Monthly Summary of Outstanding Invoice Report of Report Subsystem.

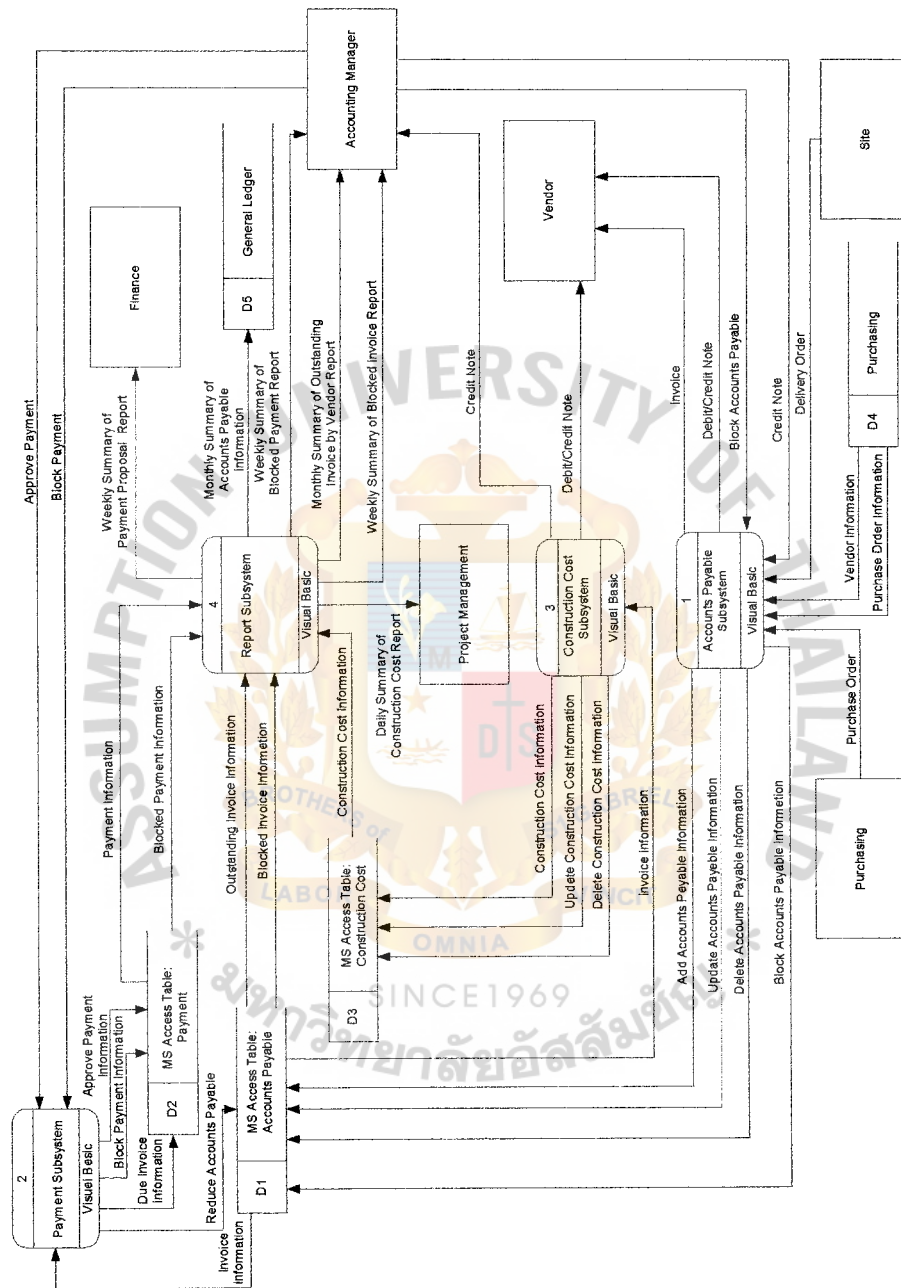


Figure 3.29. Process Architecture Diagram.

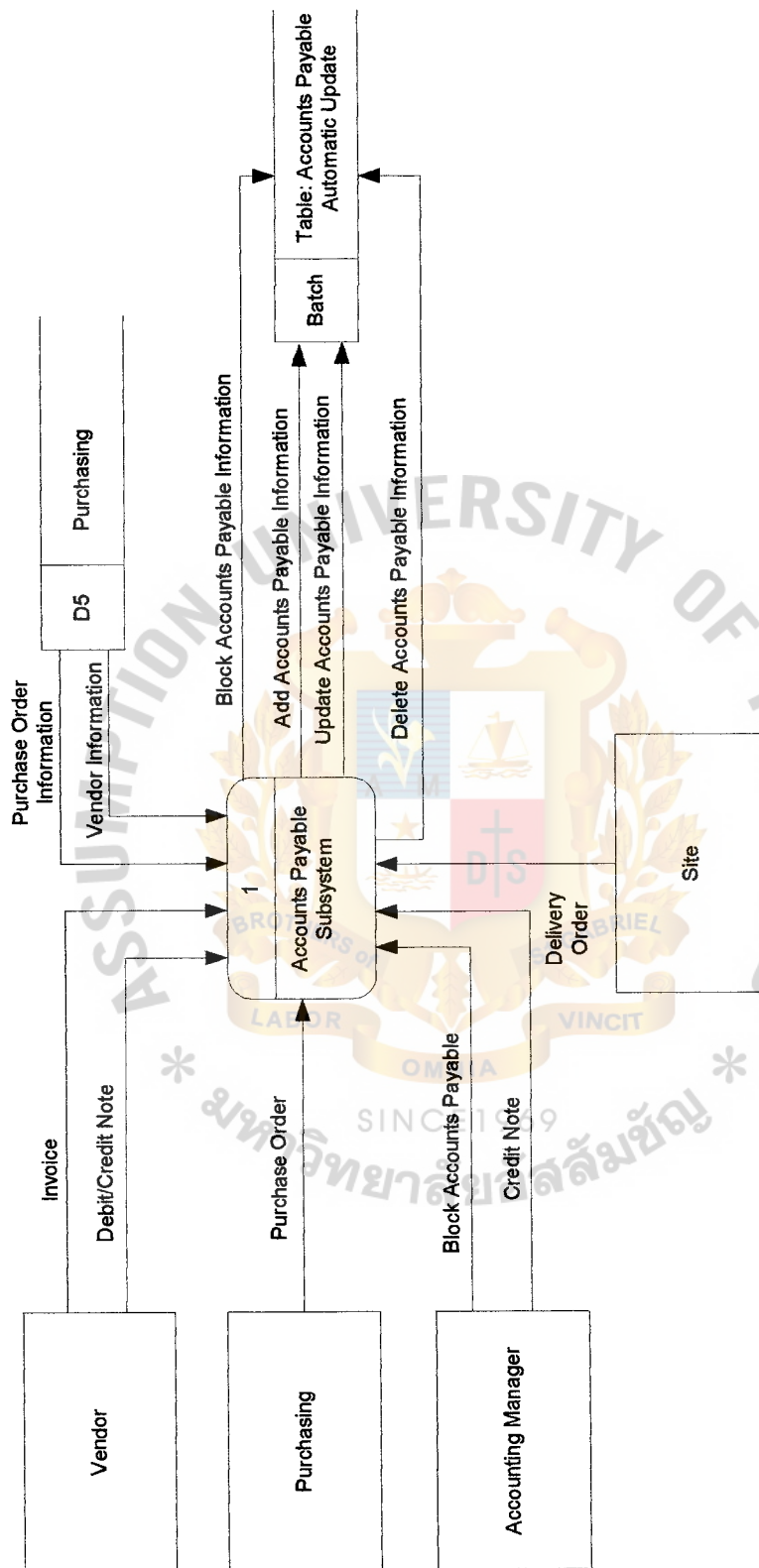


Figure 3.30. Interface Architecture Diagram – Accounts Payable Subsystem.

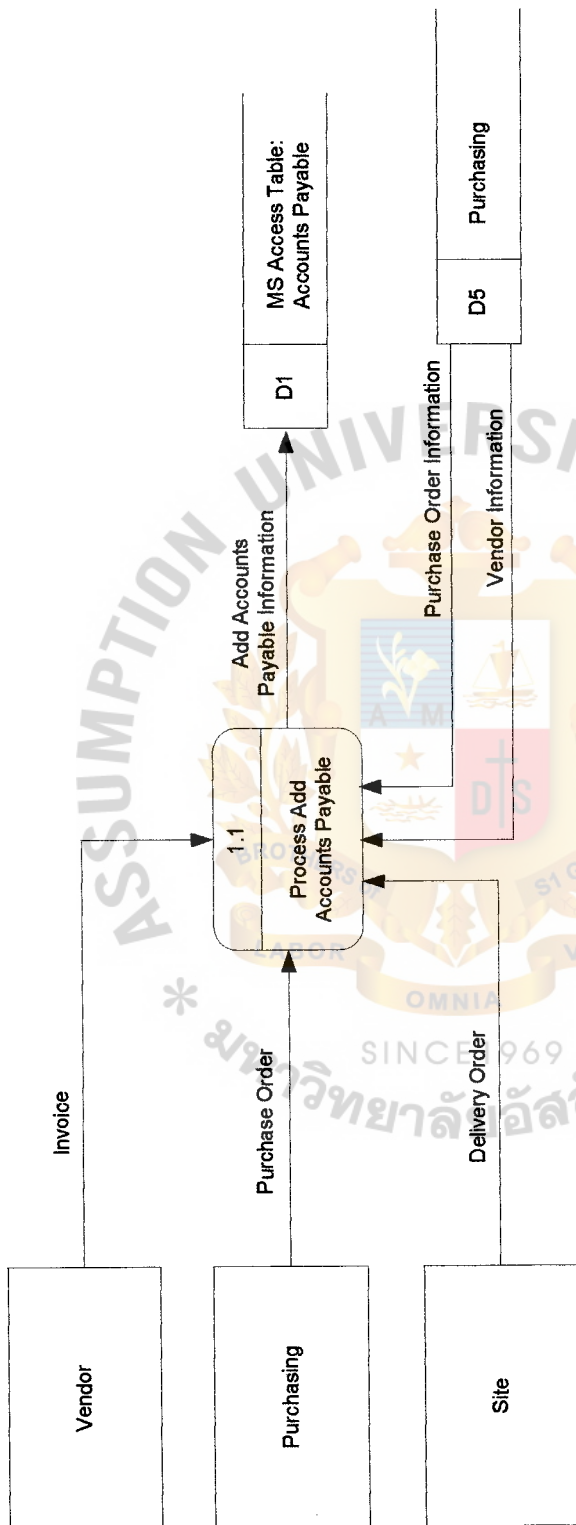


Figure 3.31. Interface Architecture Diagram – Process Add Accounts Payable of Accounts Payable Subsystem.



Figure 3.32. Interface Architecture Diagram – Process Update Accounts Payable of Accounts Payable Subsystem.

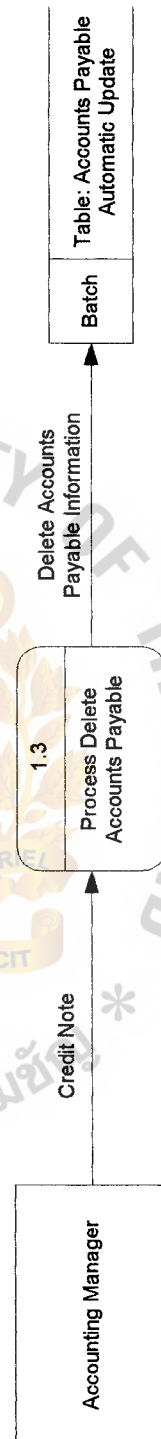


Figure 3.33. Interface Architecture Diagram – Process Delete Accounts Payable of Accounts Payable Subsystem.

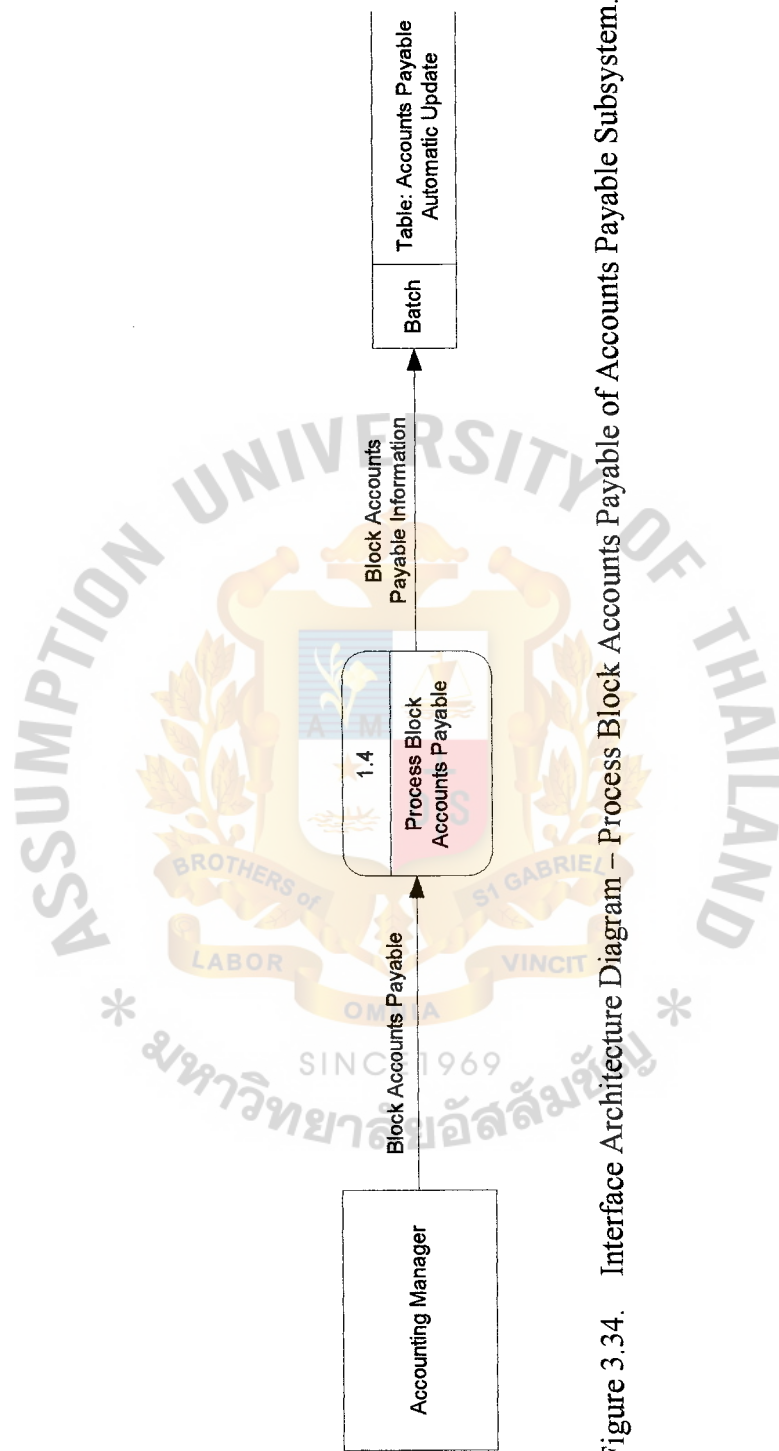


Figure 3.34. Interface Architecture Diagram – Process Block Accounts Payable of Accounts Payable Subsystem.

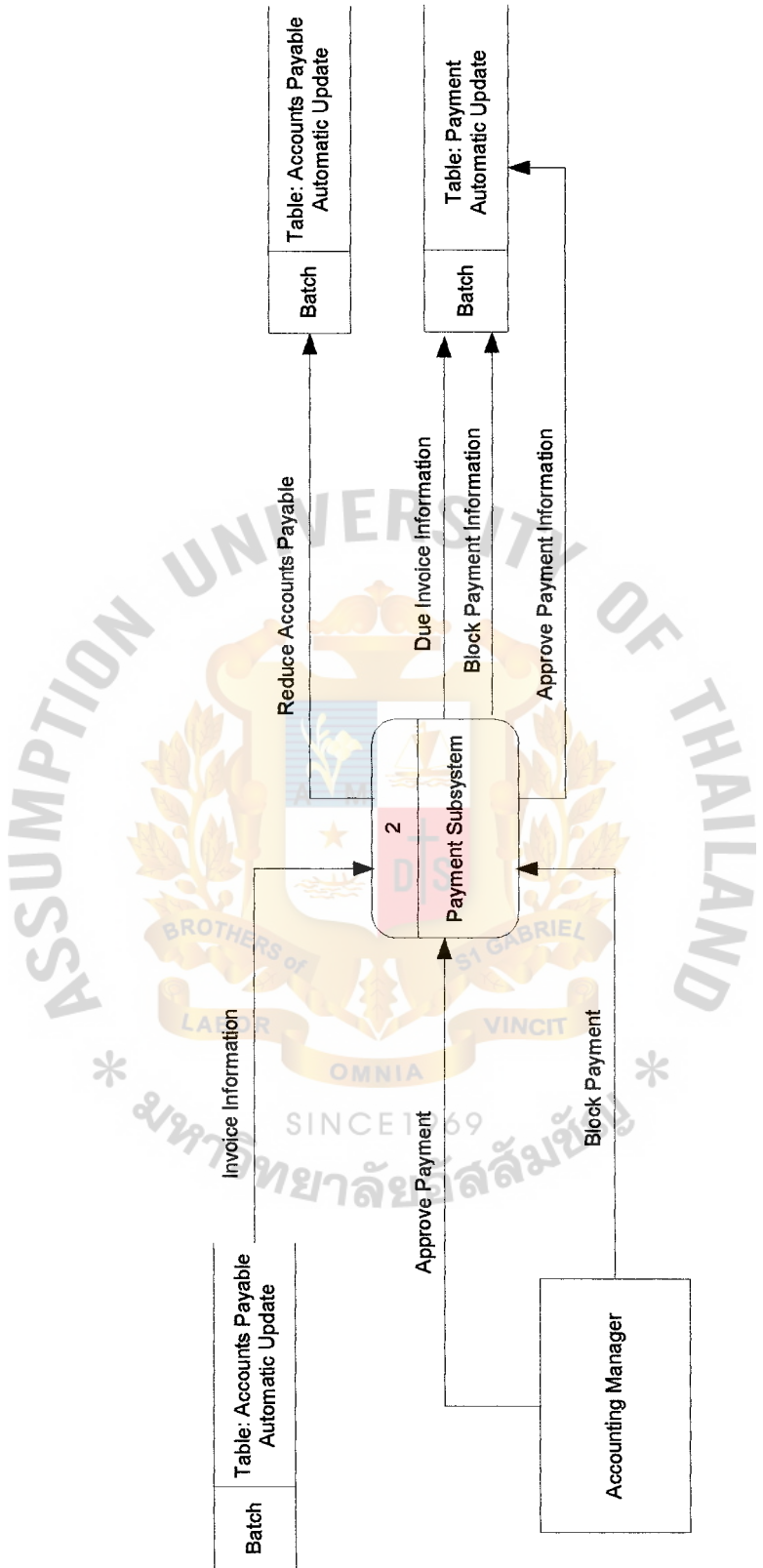


Figure 3.35. Interface Architecture Diagram – Payment Subsystem.

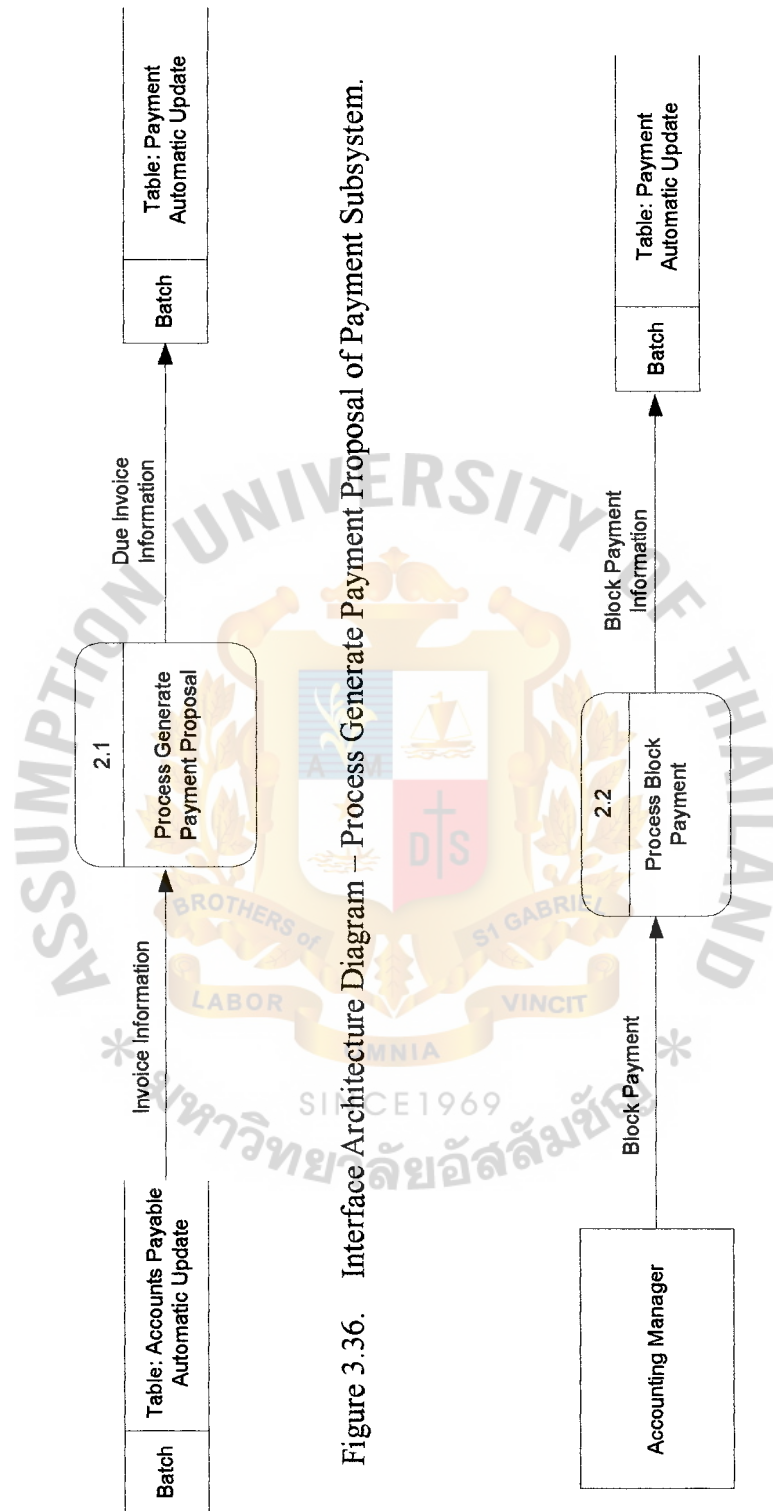


Figure 3.36. Interface Architecture Diagram – Process Generate Payment Proposal of Payment Subsystem.

Figure 3.37. Interface Architecture Diagram – Process Block Payment of Payment Subsystem.

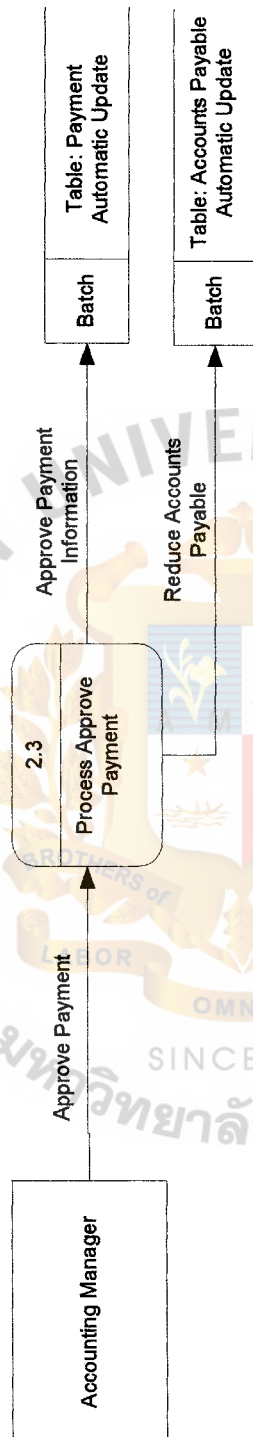


Figure 3.38. Interface Architecture Diagram – Process Approve Payment of Payment Subsystem.

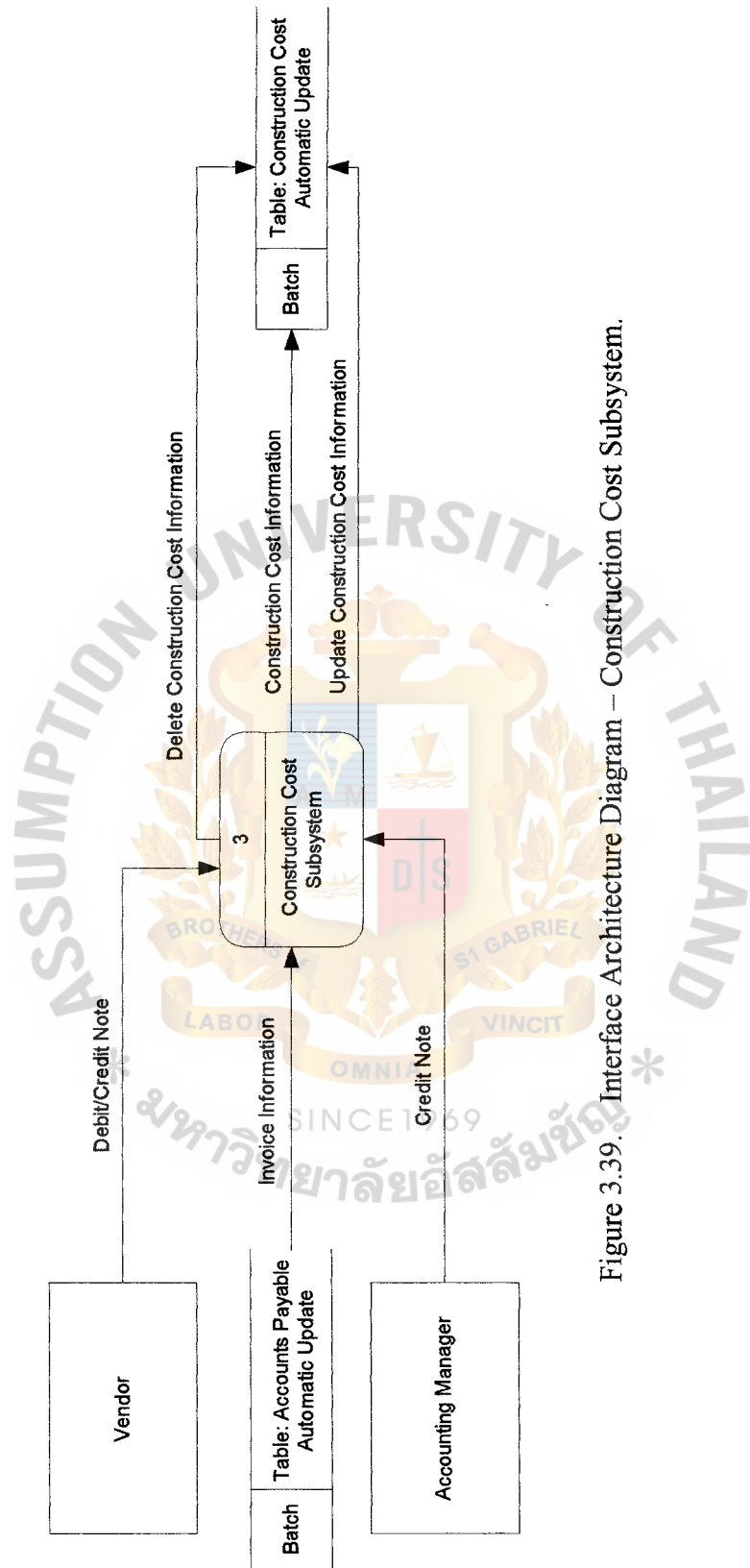


Figure 3.39. Interface Architecture Diagram – Construction Cost Subsystem.

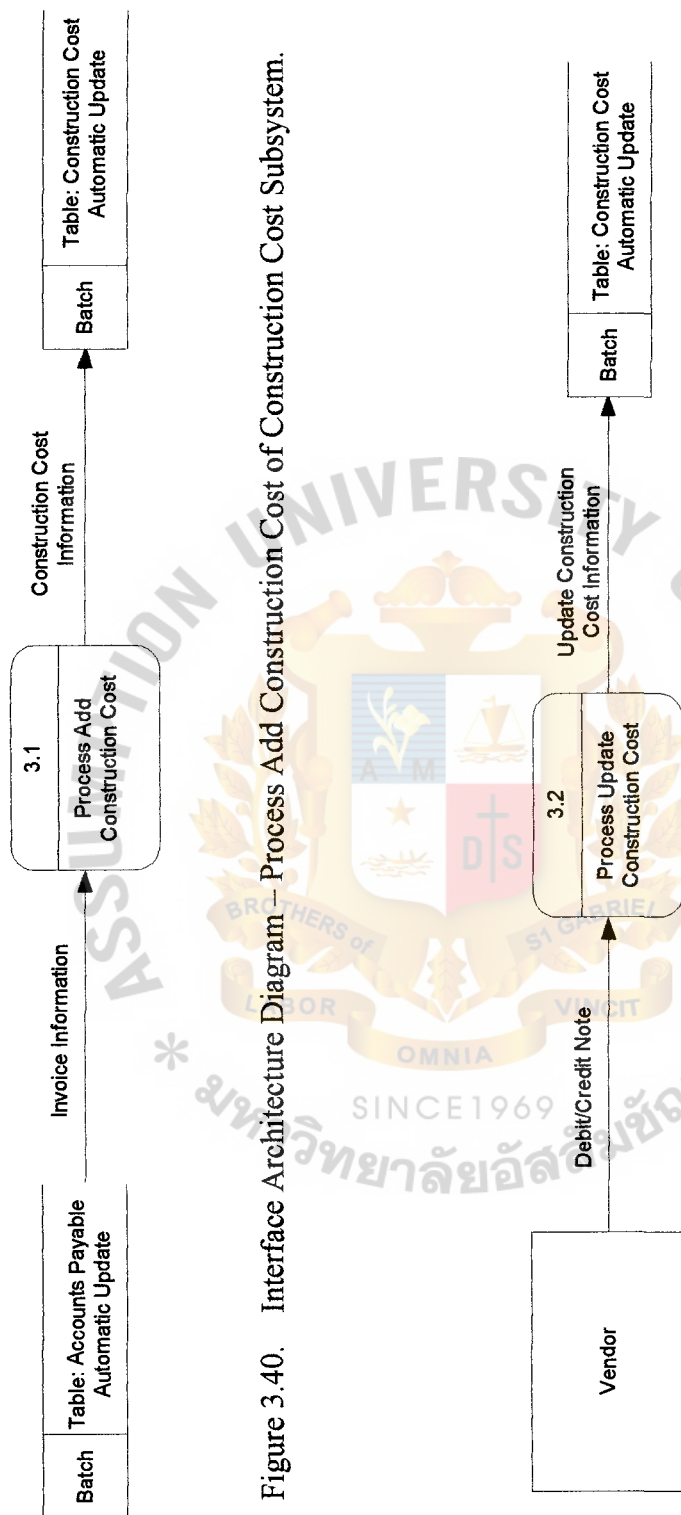


Figure 3.40. Interface Architecture Diagram – Process Add Construction Cost of Construction Cost Subsystem.

Figure 3.41. Interface Architecture Diagram – Process Update Construction Cost of Construction Cost Subsystem.



Figure 3.42. Interface Architecture Diagram – Process Delete Construction Cost of Construction Cost Subsystem.

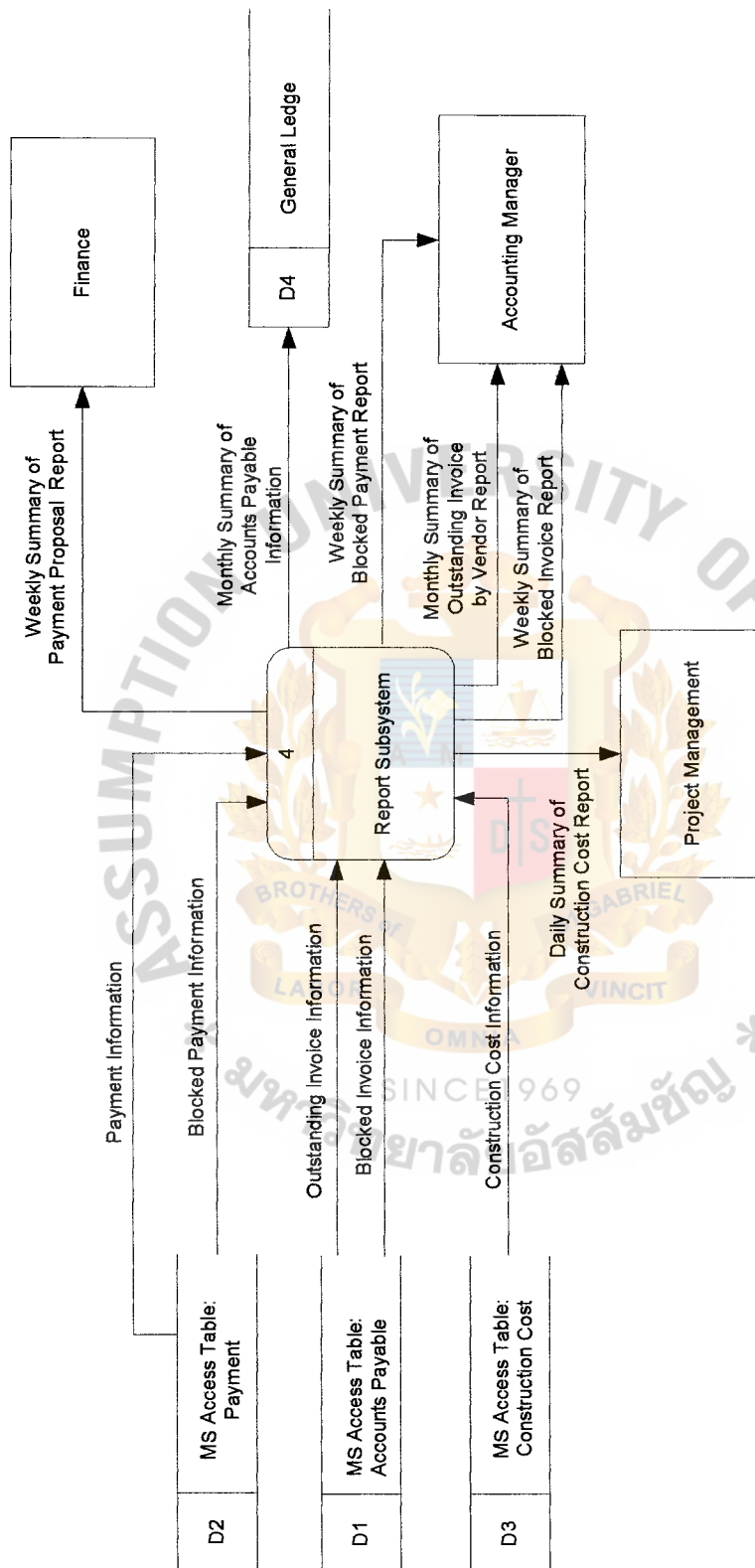


Figure 3.43. Interface Architecture Diagram – Report Subsystem.

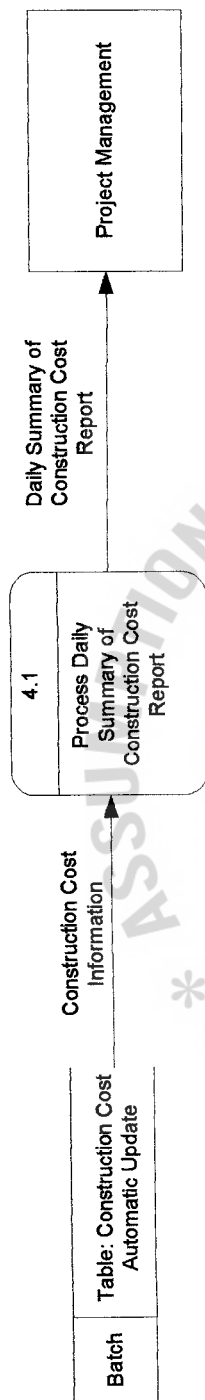


Figure 3.44. Interface Architecture Diagram – Process Generate Daily Summary of Construction Cost Report of Report Subsystem.

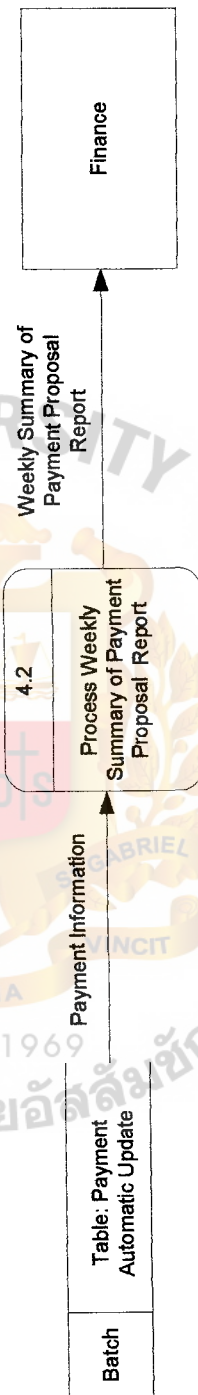


Figure 3.45. Interface Architecture Diagram – Process Generate Weekly Summary of Payment Proposal Report of Report Subsystem.

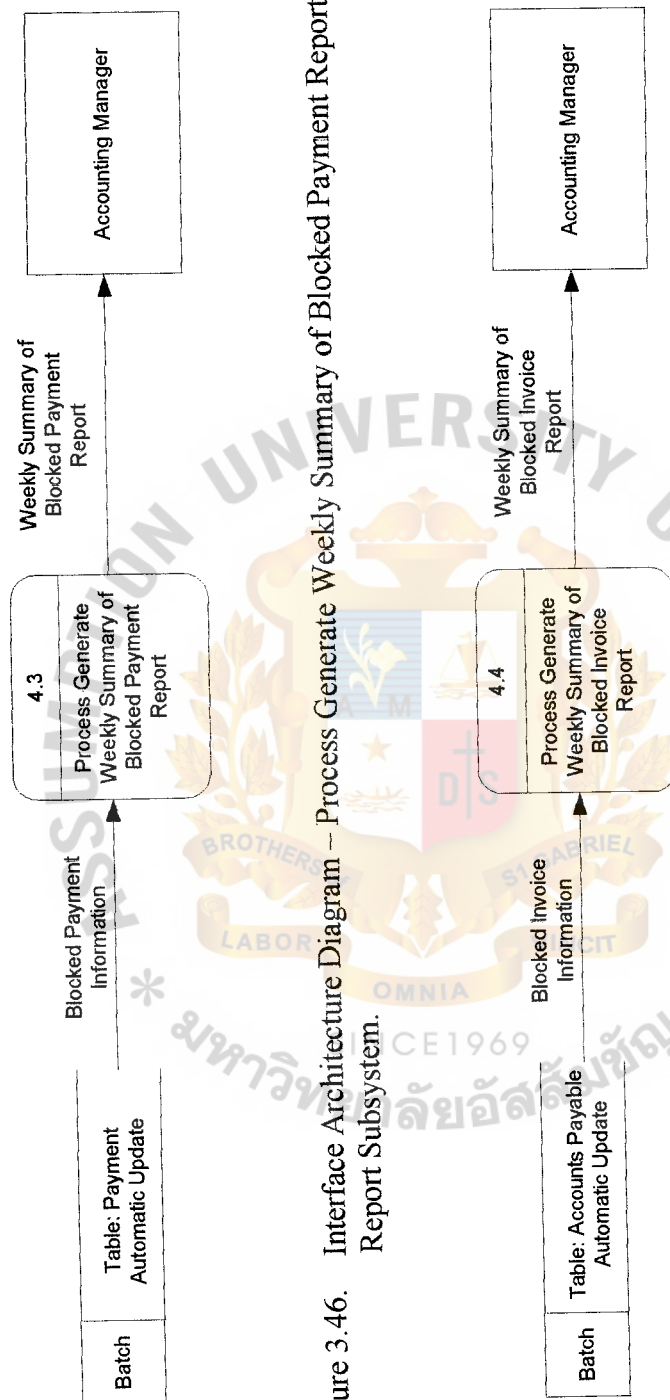


Figure 3.46. Interface Architecture Diagram – Process Generate Weekly Summary of Blocked Payment Report of Report Subsystem.

Figure 3.47. Interface Architecture Diagram – Process Generate Weekly Summary of Blocked Invoice Report of Report Subsystem.

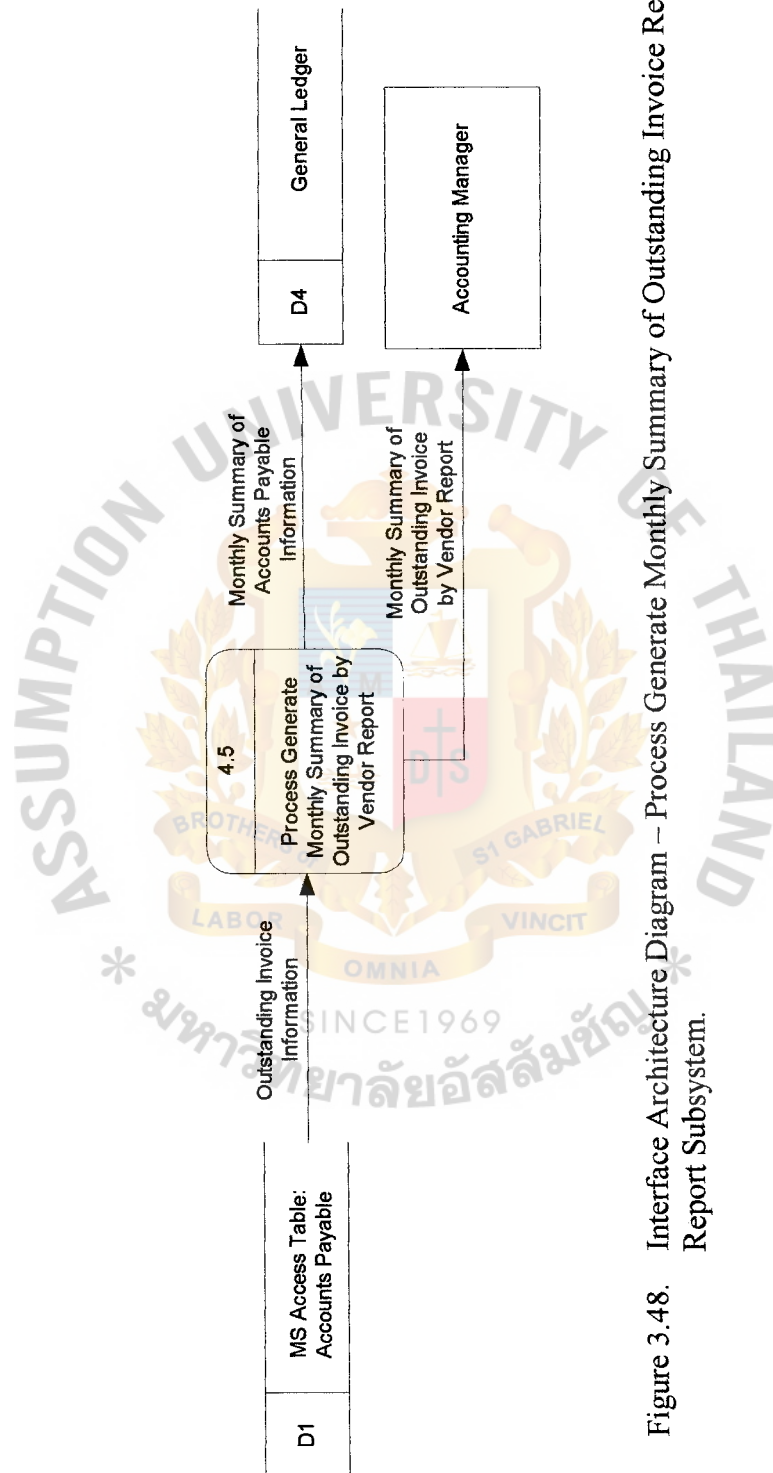


Figure 3.48. Interface Architecture Diagram – Process Generate Monthly Summary of Outstanding Invoice Report of Report Subsystem.

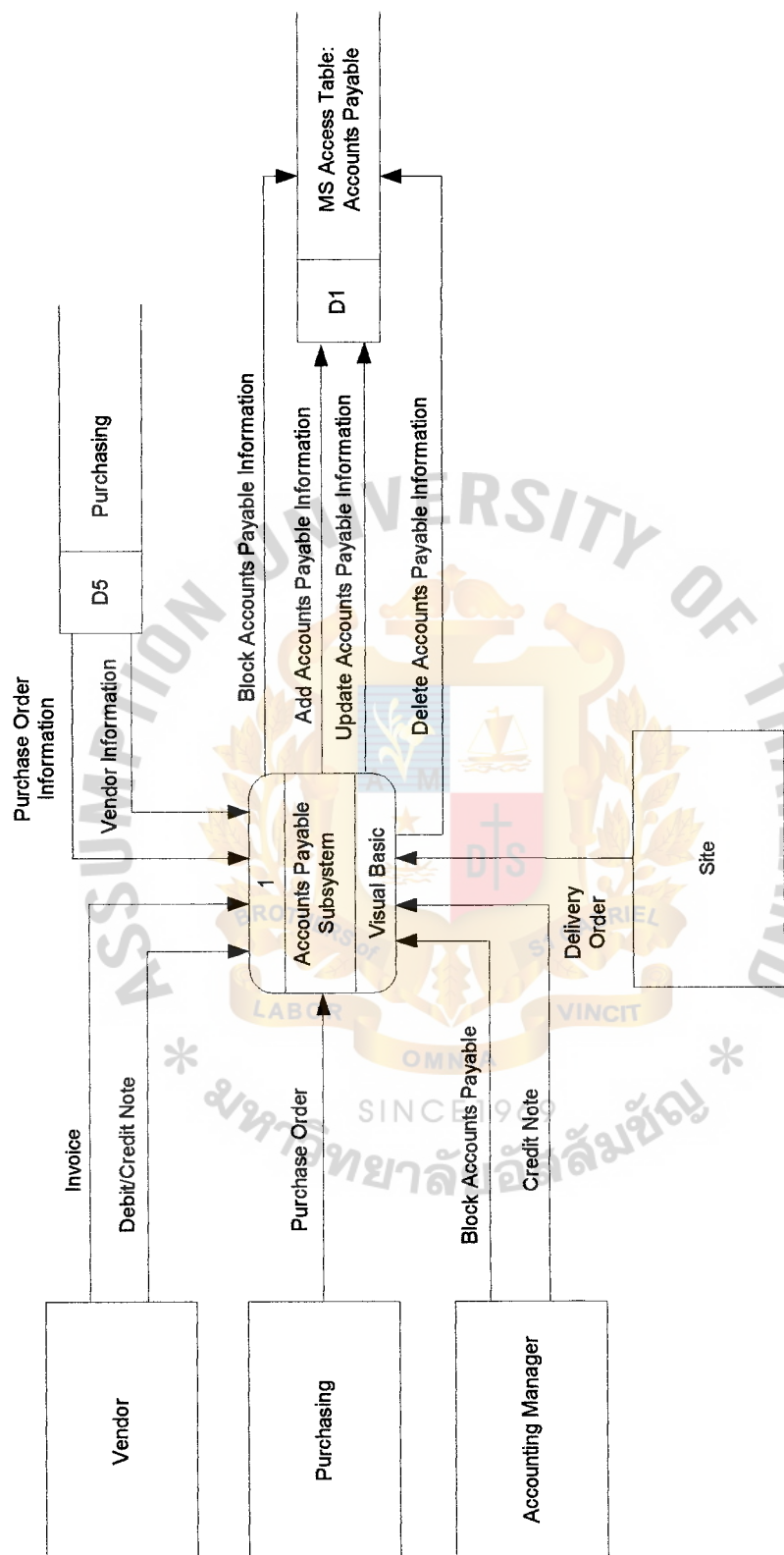


Figure 3.49. Physical Dataflow Diagram – Accounts Payable Subsystem.

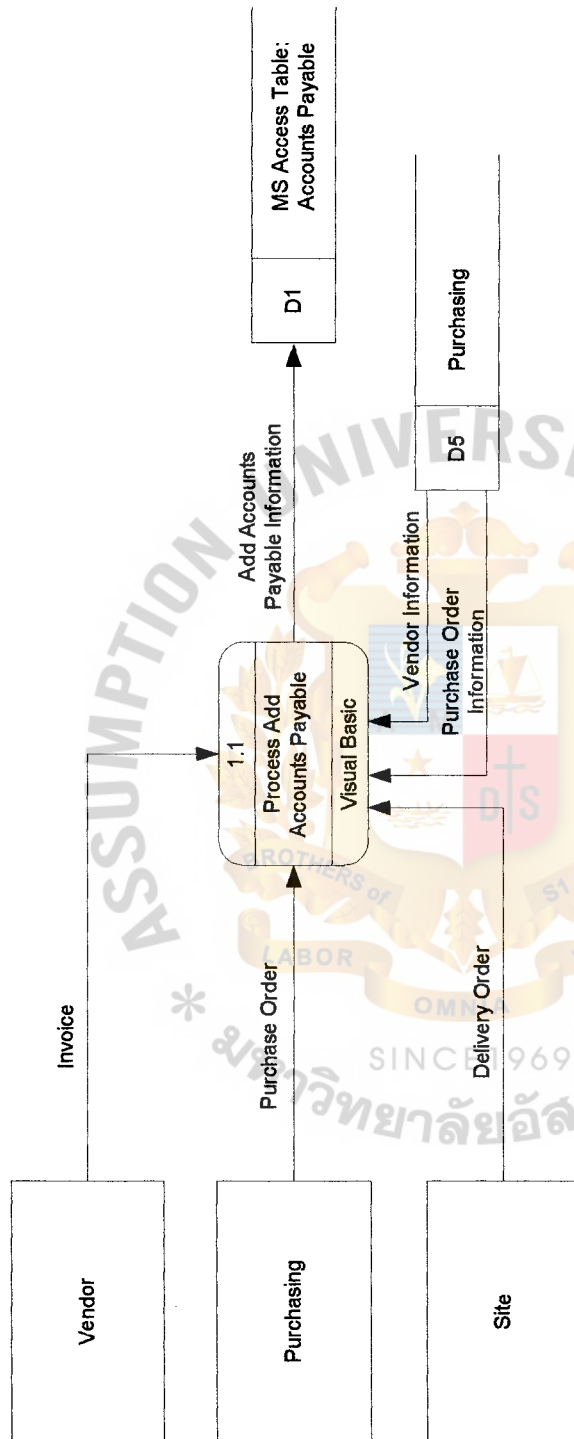


Figure 3.50. Physical Dataflow Diagram – Process Add Accounts Payable of Accounts Payable Subsystem.

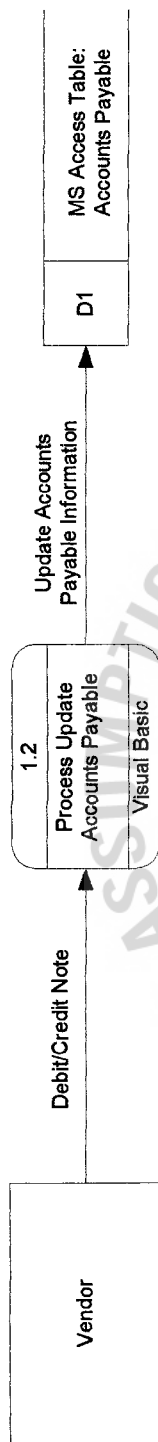


Figure 3.51. Physical Dataflow Diagram – Process Update Accounts Payable of Accounts Payable Subsystem.



Figure 3.52. Physical Dataflow Diagram – Process Delete Accounts Payable of Accounts Payable Subsystem.

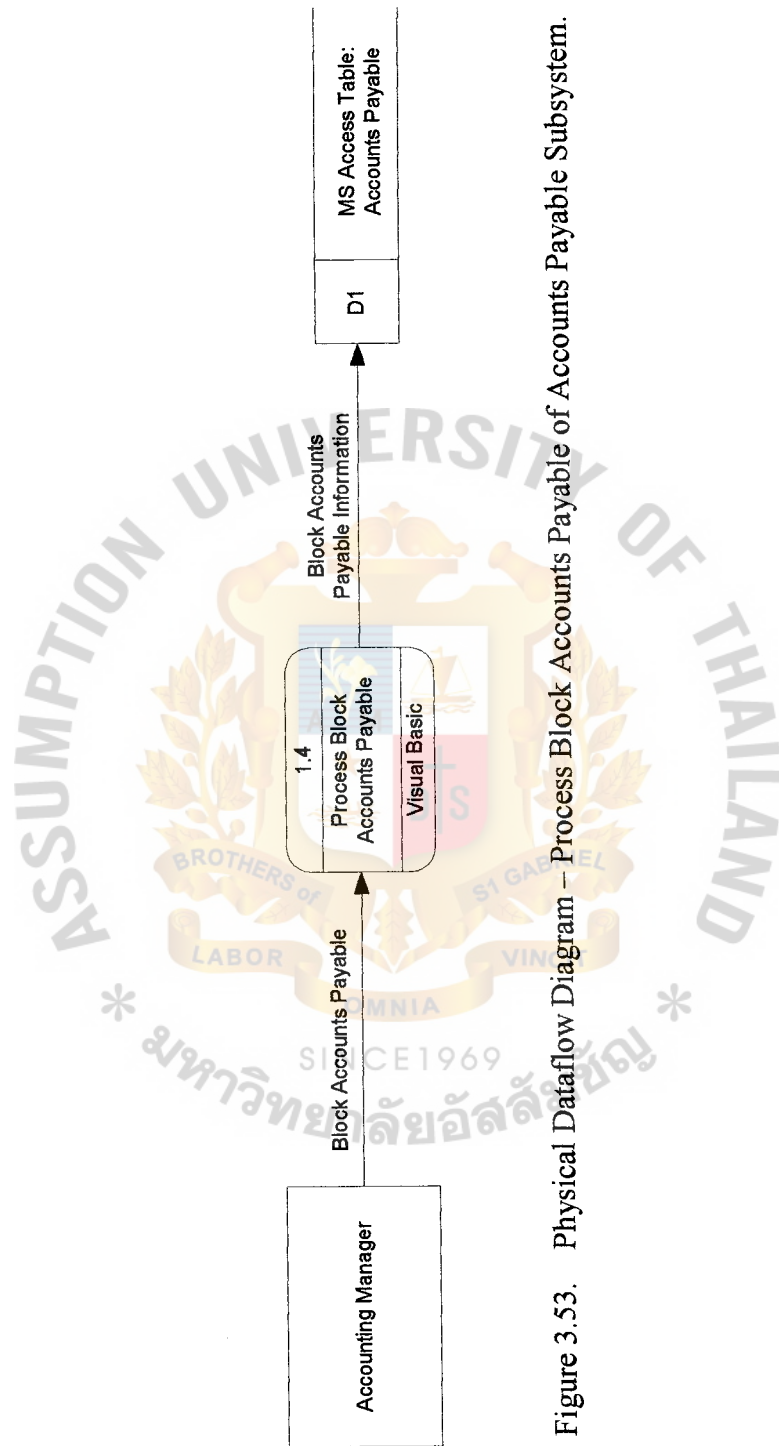


Figure 3.53. Physical Dataflow Diagram – Process Block Accounts Payable of Accounts Payable Subsystem.

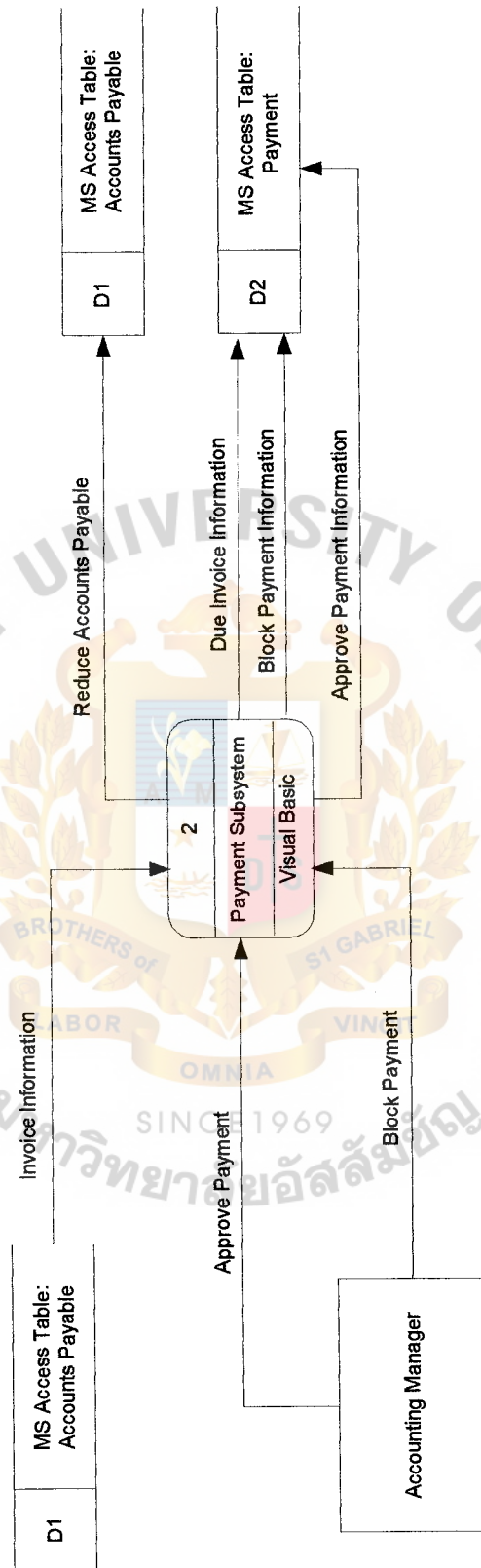


Figure 3.54. Physical Dataflow Diagram – Payment Subsystem.

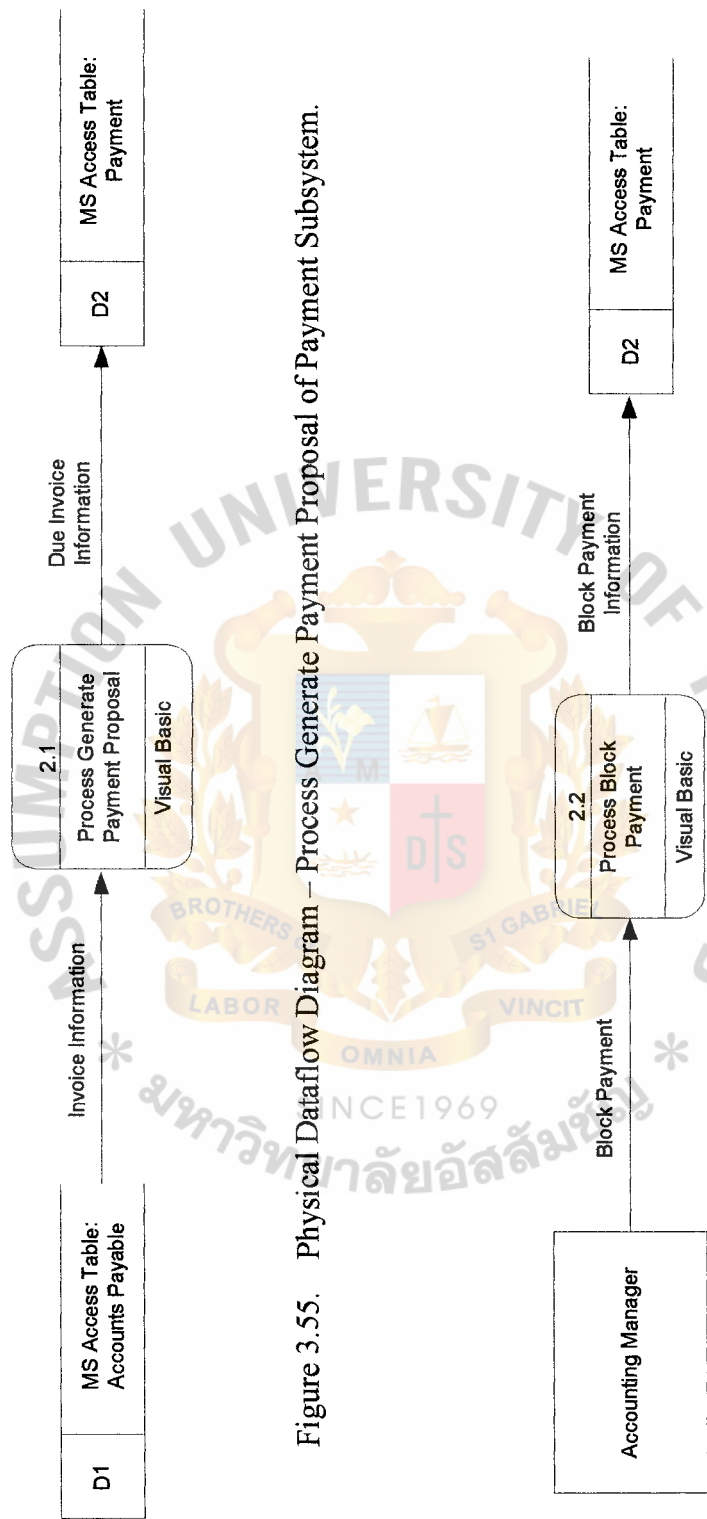


Figure 3.55. Physical Dataflow Diagram – Process Generate Payment Proposal of Payment Subsystem.

Figure 3.56. Physical Dataflow Diagram – Process Block Payment of Payment Subsystem.

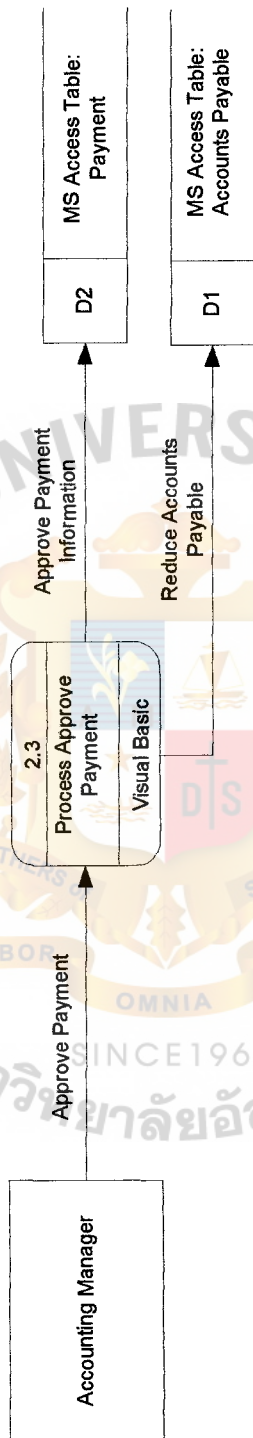


Figure 3.57. Physical Dataflow Diagram – Process Approve Payment of Payment Subsystem.

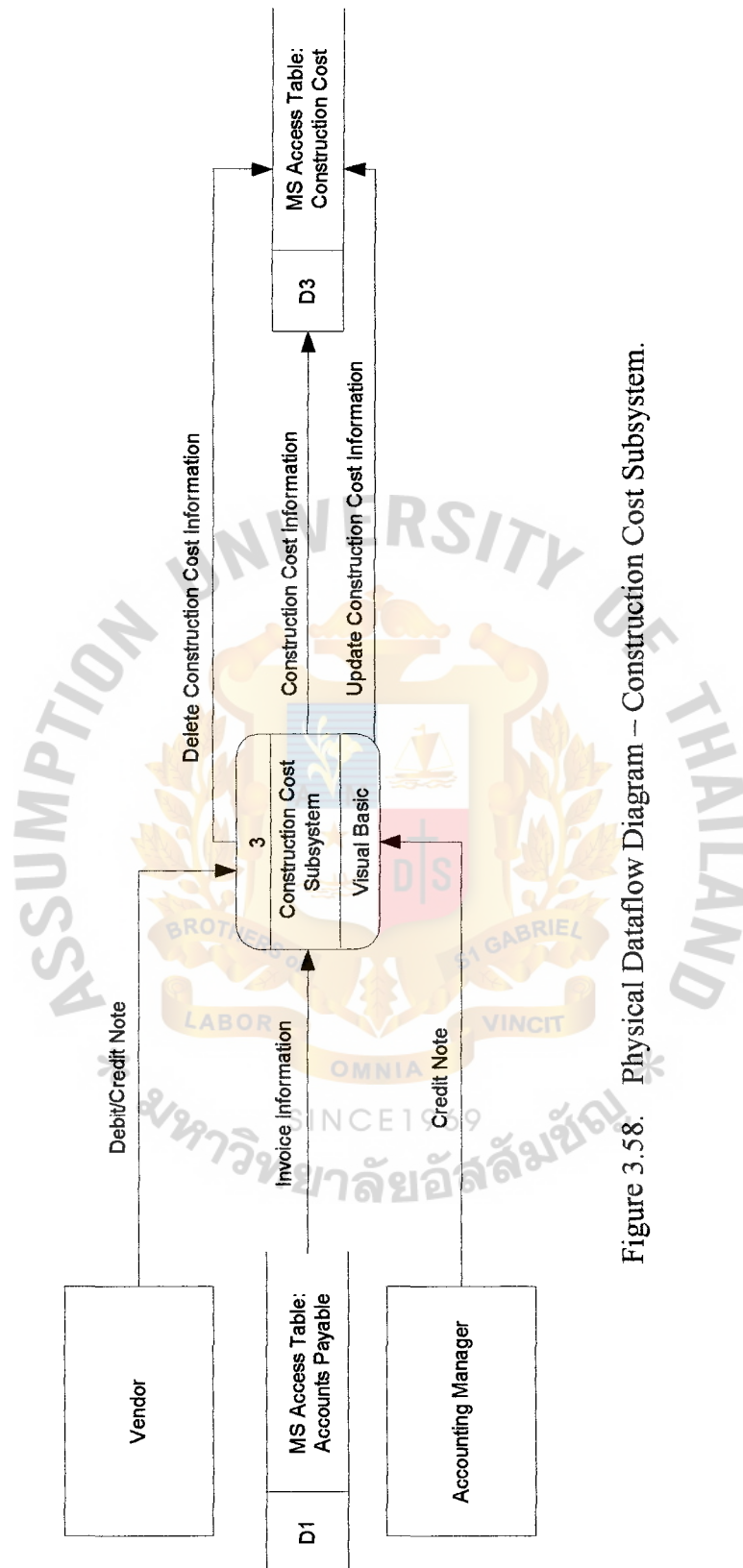


Figure 3.58. Physical Dataflow Diagram – Construction Cost Subsystem.

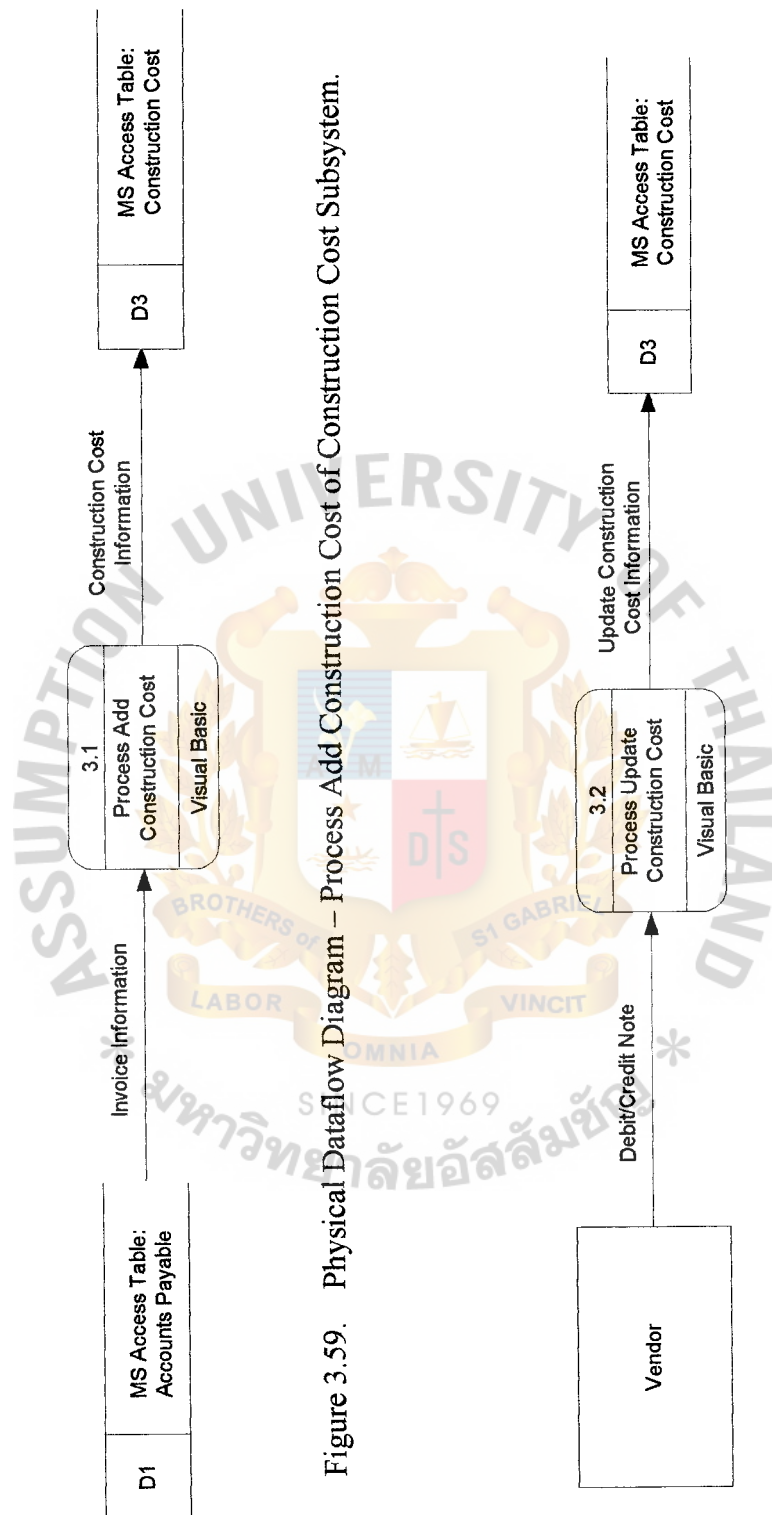


Figure 3.59. Physical Dataflow Diagram – Process Add Construction Cost of Construction Cost Subsystem.

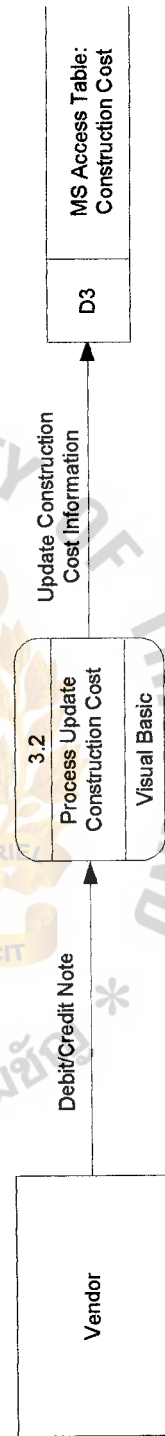


Figure 3.60. Physical Dataflow Diagram – Process Update Construction Cost of Construction Cost Subsystem.

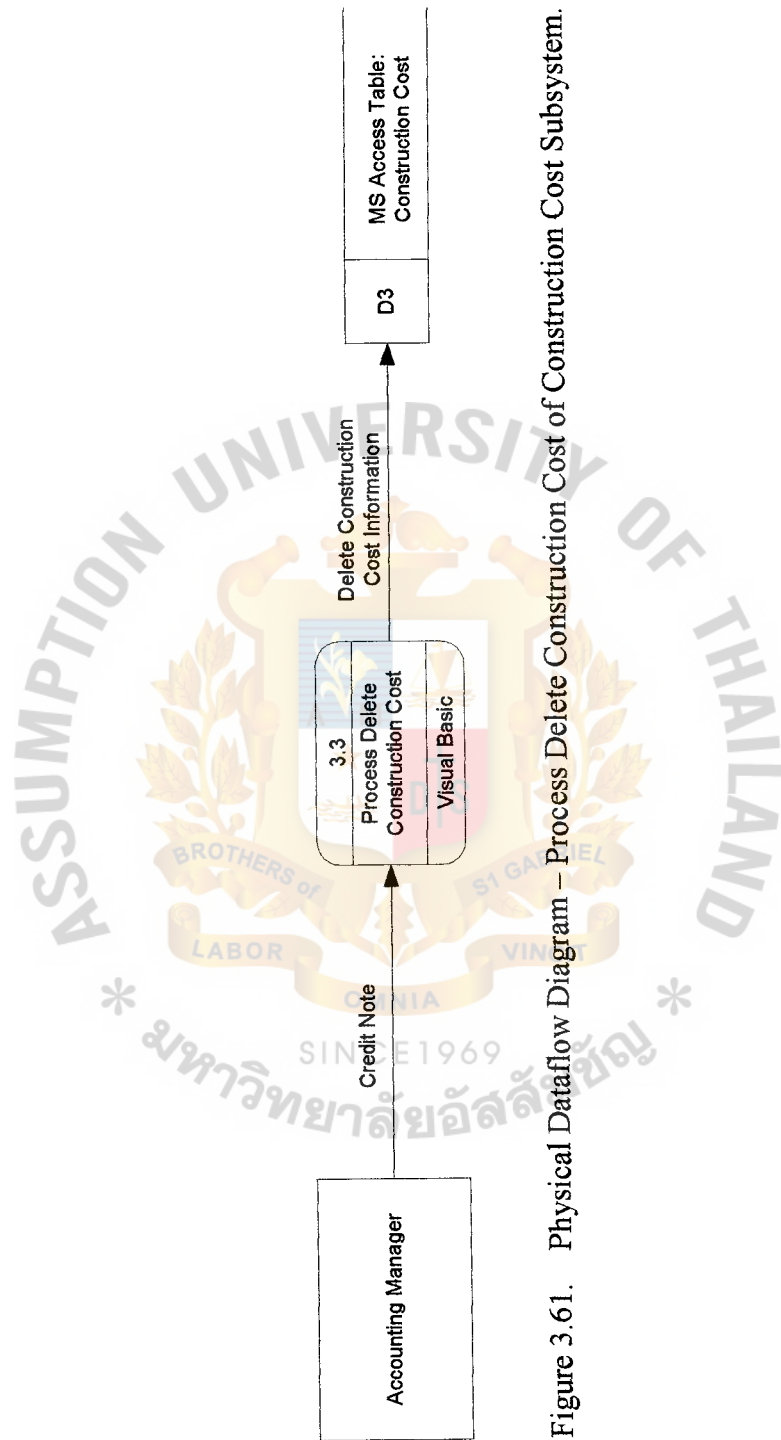


Figure 3.61. Physical Dataflow Diagram – Process Delete Construction Cost of Construction Cost Subsystem.

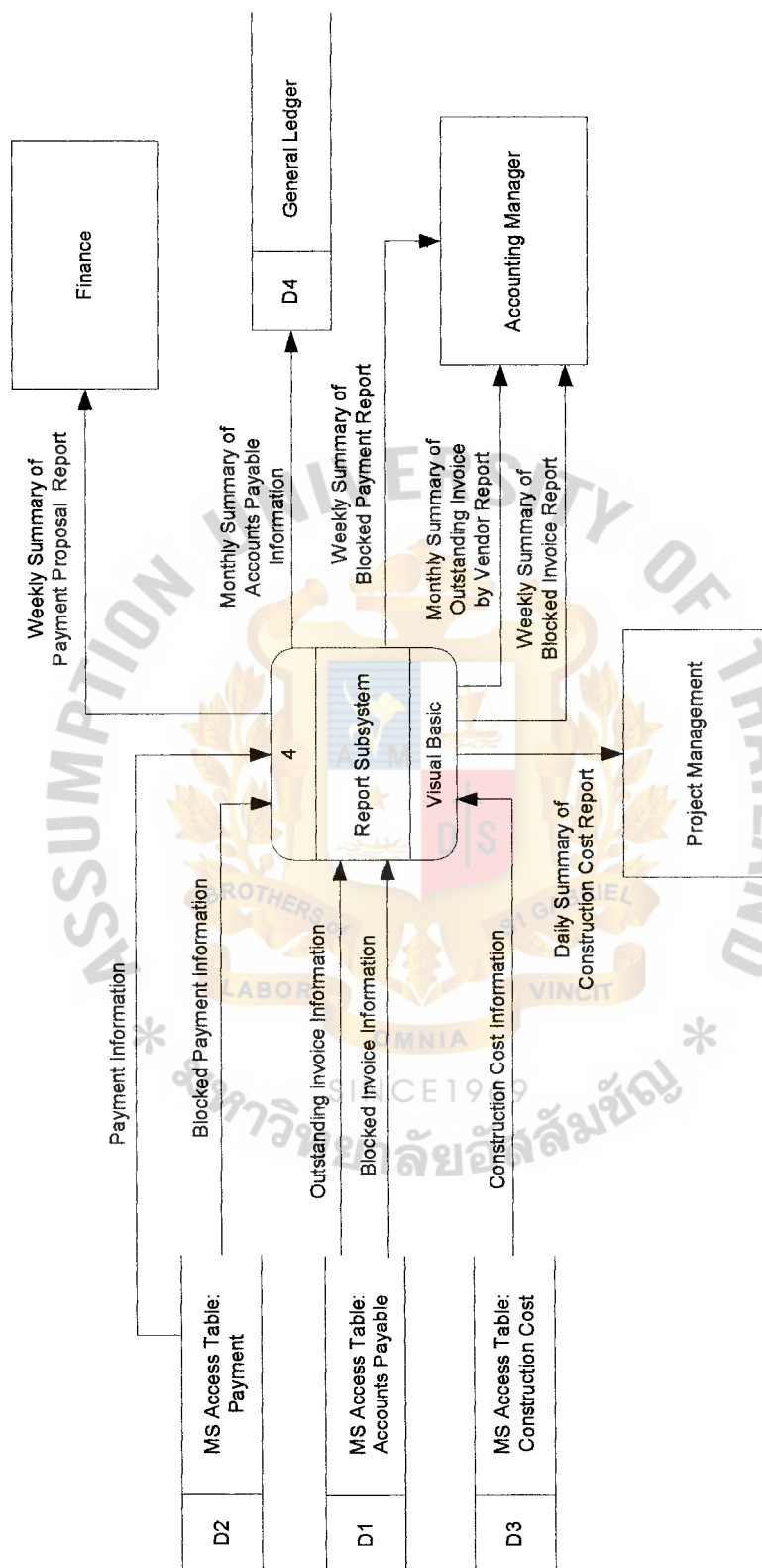


Figure 3.62. Physical Dataflow Diagram – Report Subsystem.

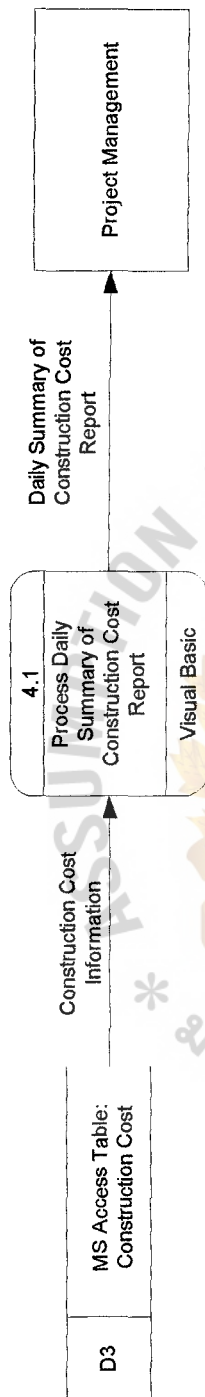


Figure 3.63. Physical Dataflow Diagram – Process Generate Daily Summary of Construction Cost Report of Report Subsystem.

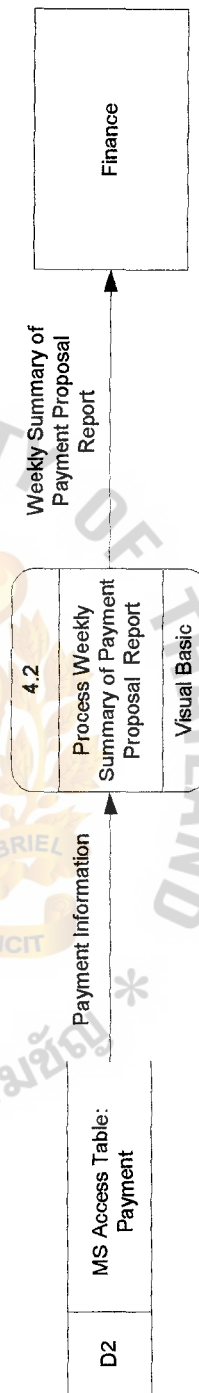


Figure 3.64. Physical Dataflow Diagram – Process Generate Weekly Summary of Payment Proposal Report of Report Subsystem.

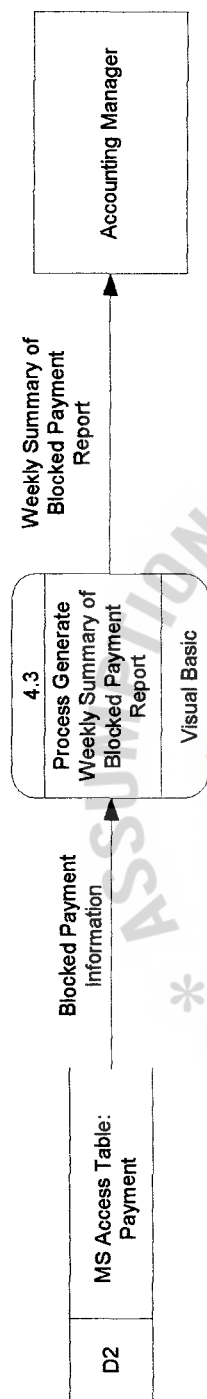


Figure 3.65. Physical Dataflow Diagram – Process Generate Weekly Summary of Blocked Payment Report of Report Subsystem.

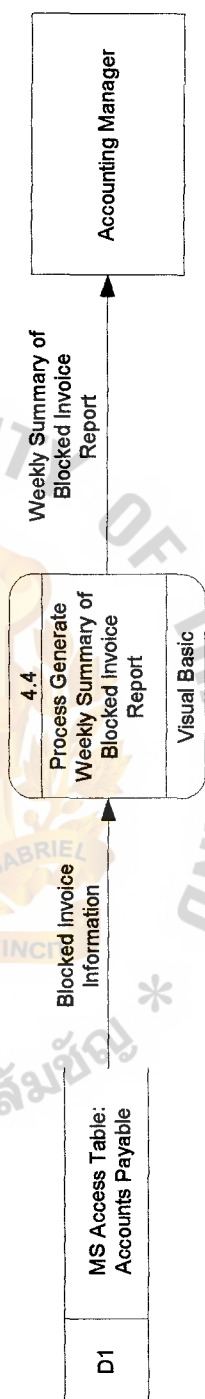


Figure 3.66. Physical Dataflow Diagram – Process Generate Weekly Summary of Blocked Invoice Report of Report Subsystem.

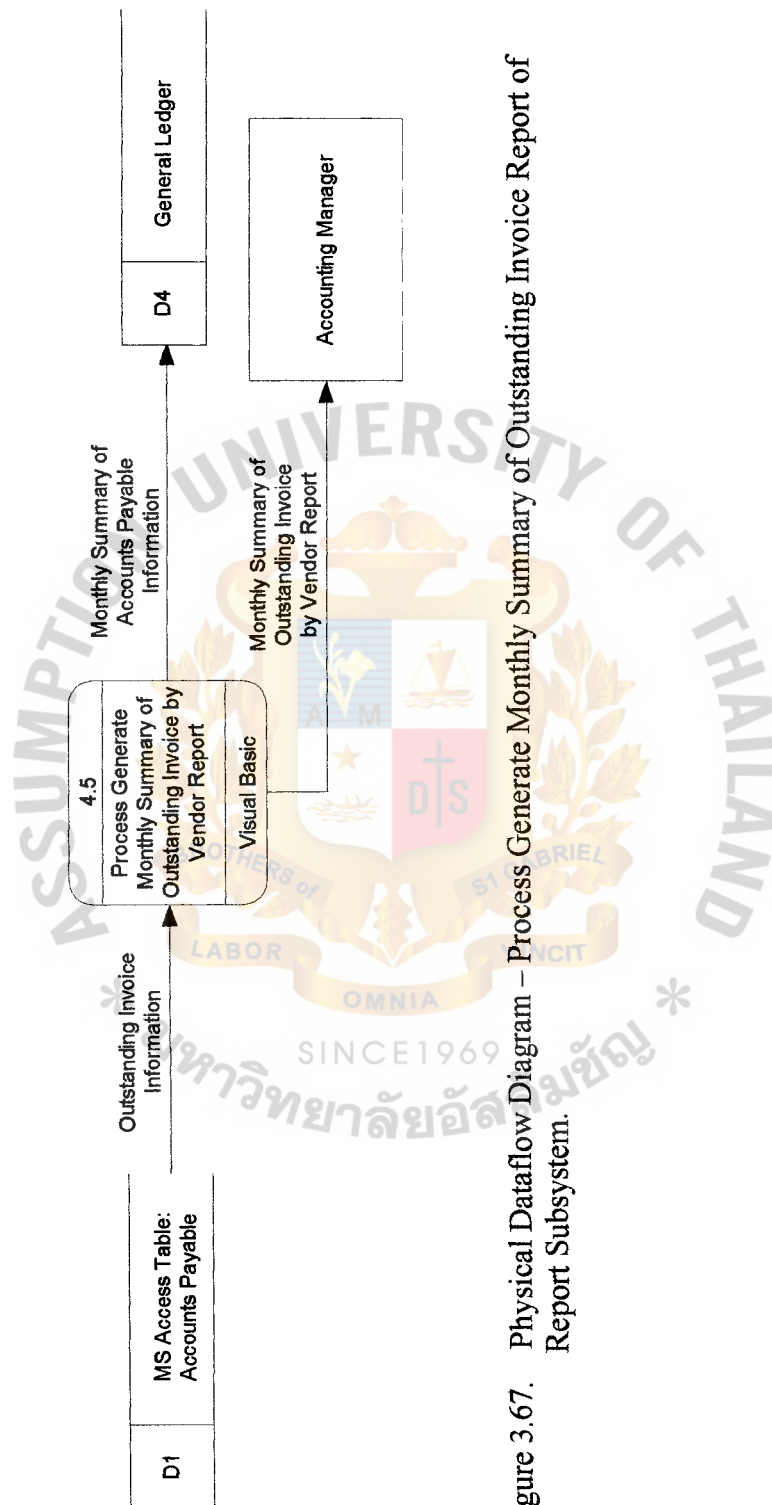


Figure 3.67. Physical Dataflow Diagram – Process Generate Monthly Summary of Outstanding Invoice Report of Report Subsystem.

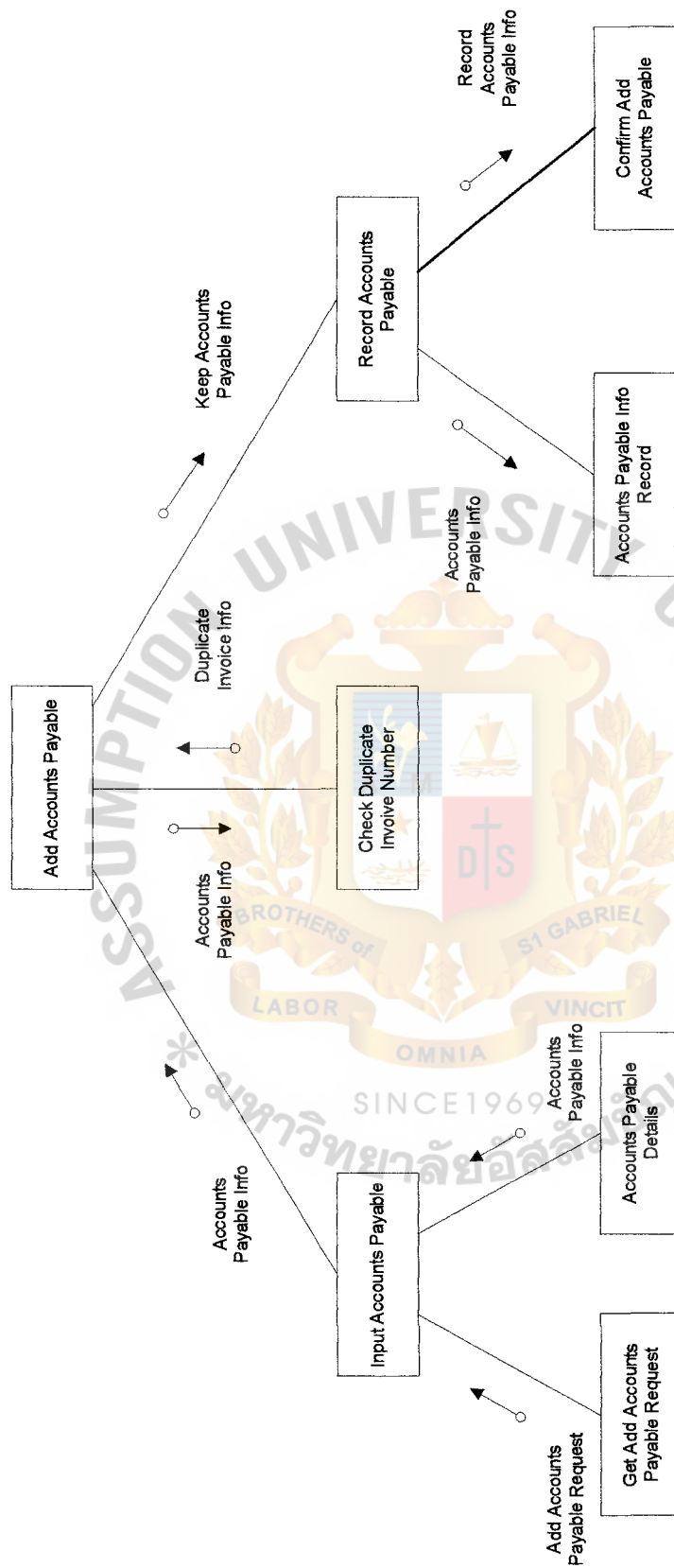


Figure 3.68. Structure Chart – Process Add Accounts Payable of Accounts Payable Subsystem.

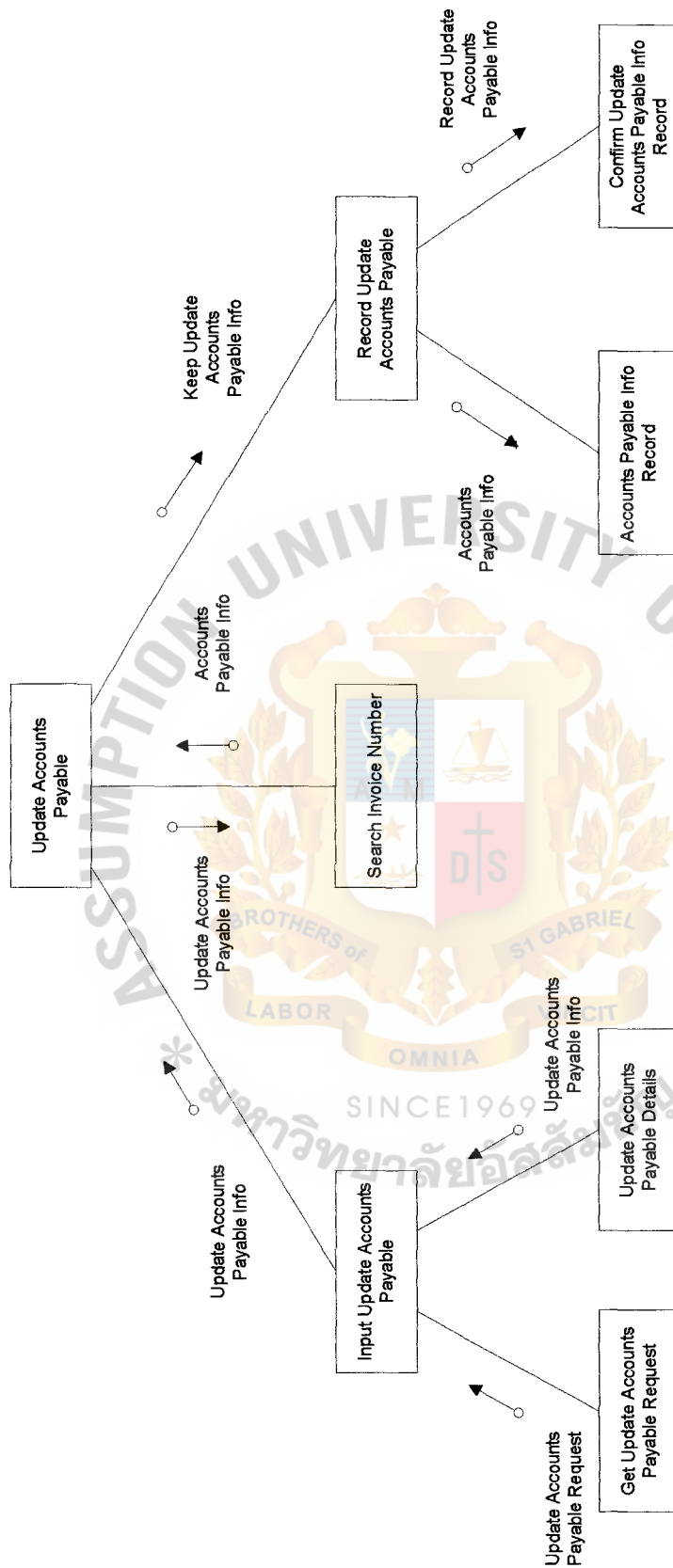


Figure 3.69. Structure Chart – Process Update Accounts Payable of Accounts Payable Subsystem.

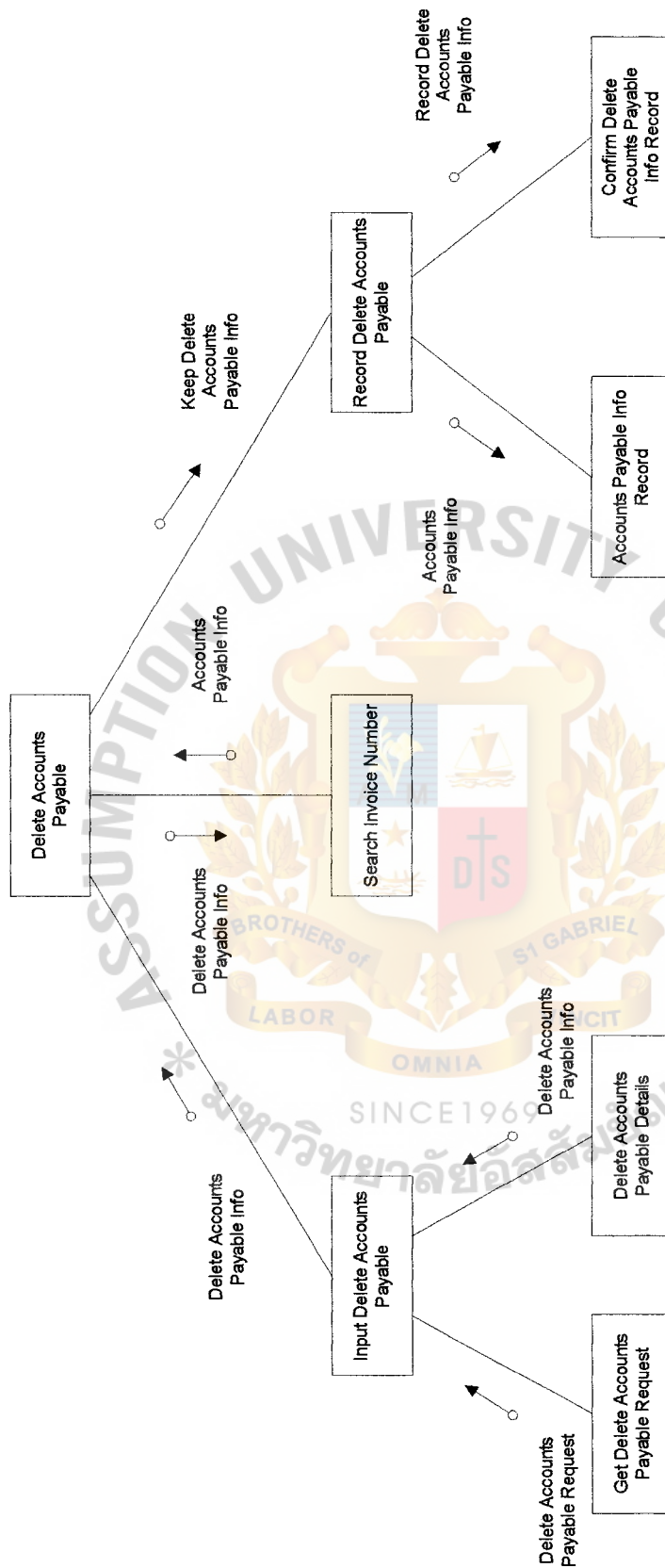


Figure 3.70. Structure Chart – Process Delete Accounts Payable of Accounts Payable Subsystem.

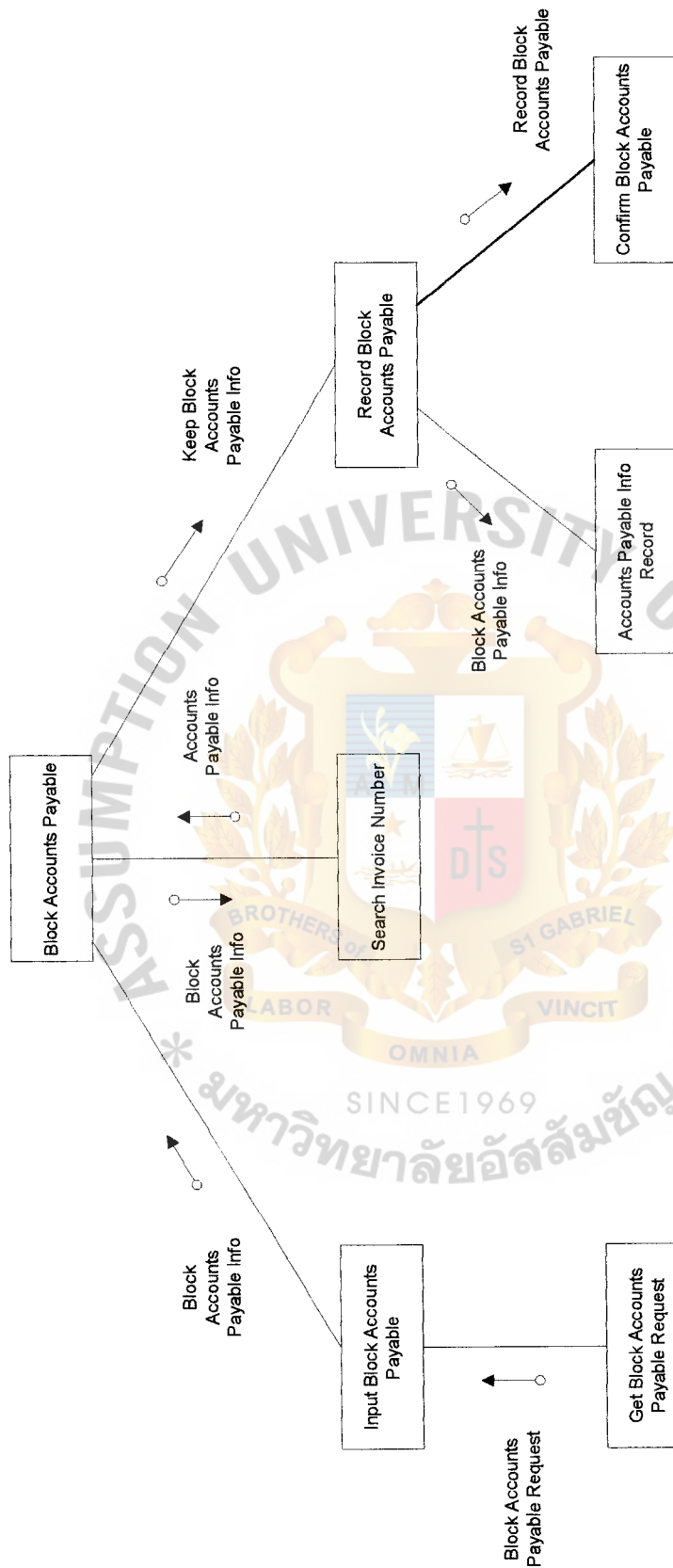


Figure 3.71. Structure Chart – Process Block Accounts Payable of Accounts Payable Subsystem.

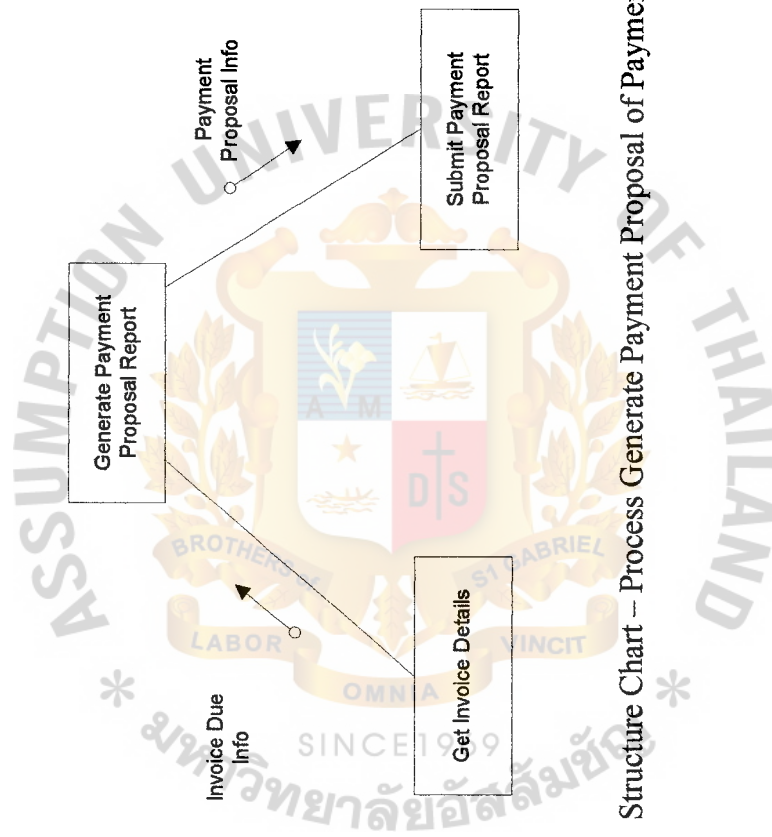


Figure 3.72. Structure Chart -- Process Generate Payment Proposal of Payment Subsystem.

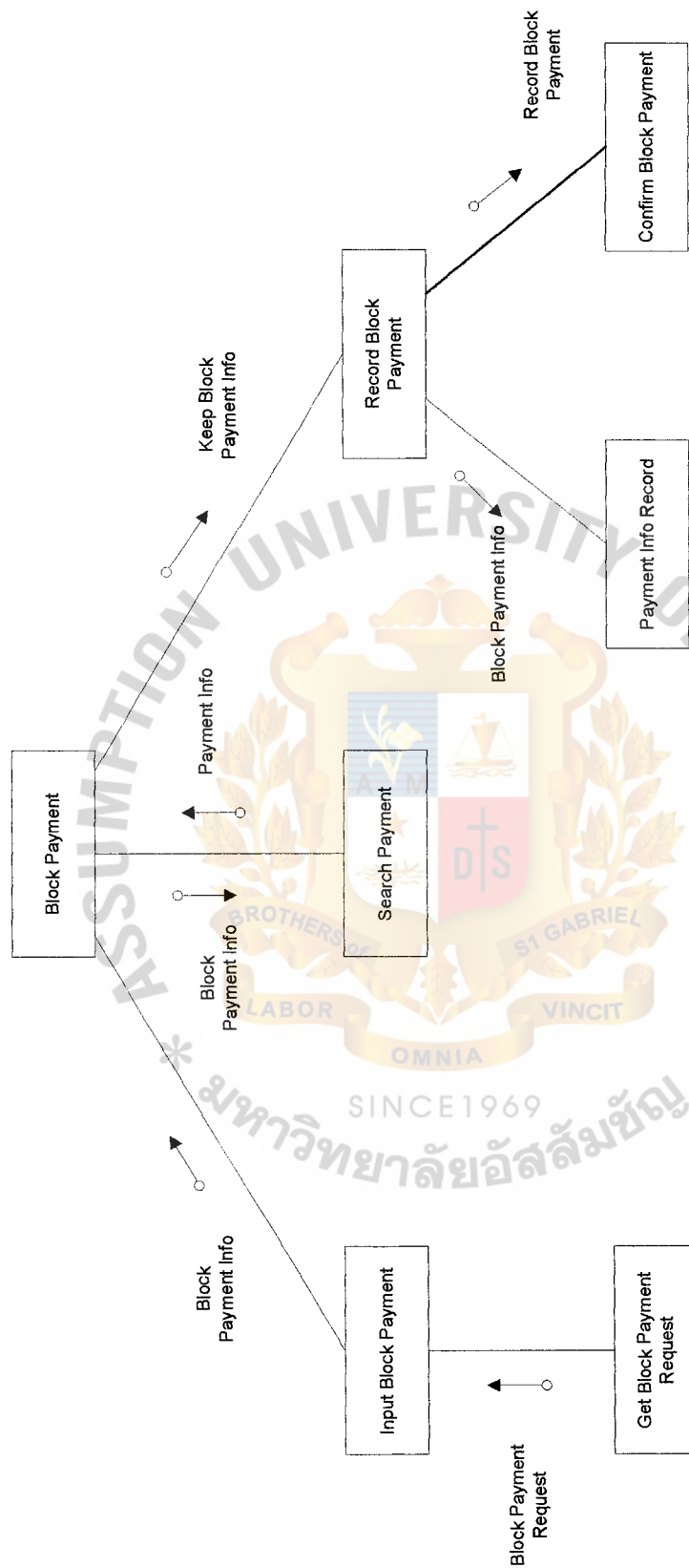


Figure 3.73. Structure Chart – Process Block Payment of Payment Subsystem.

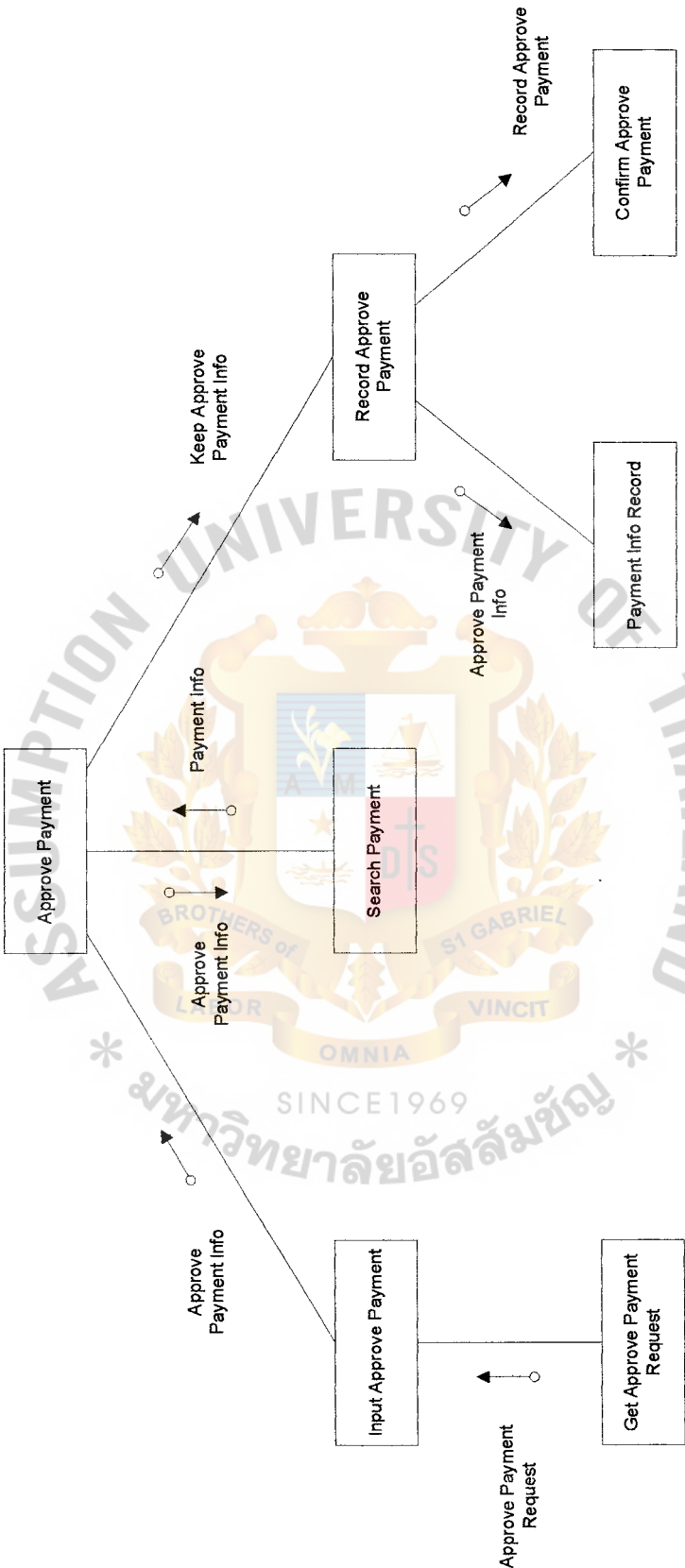


Figure 3.74. Structure Chart – Process Approve Payment of Payment Subsystem.

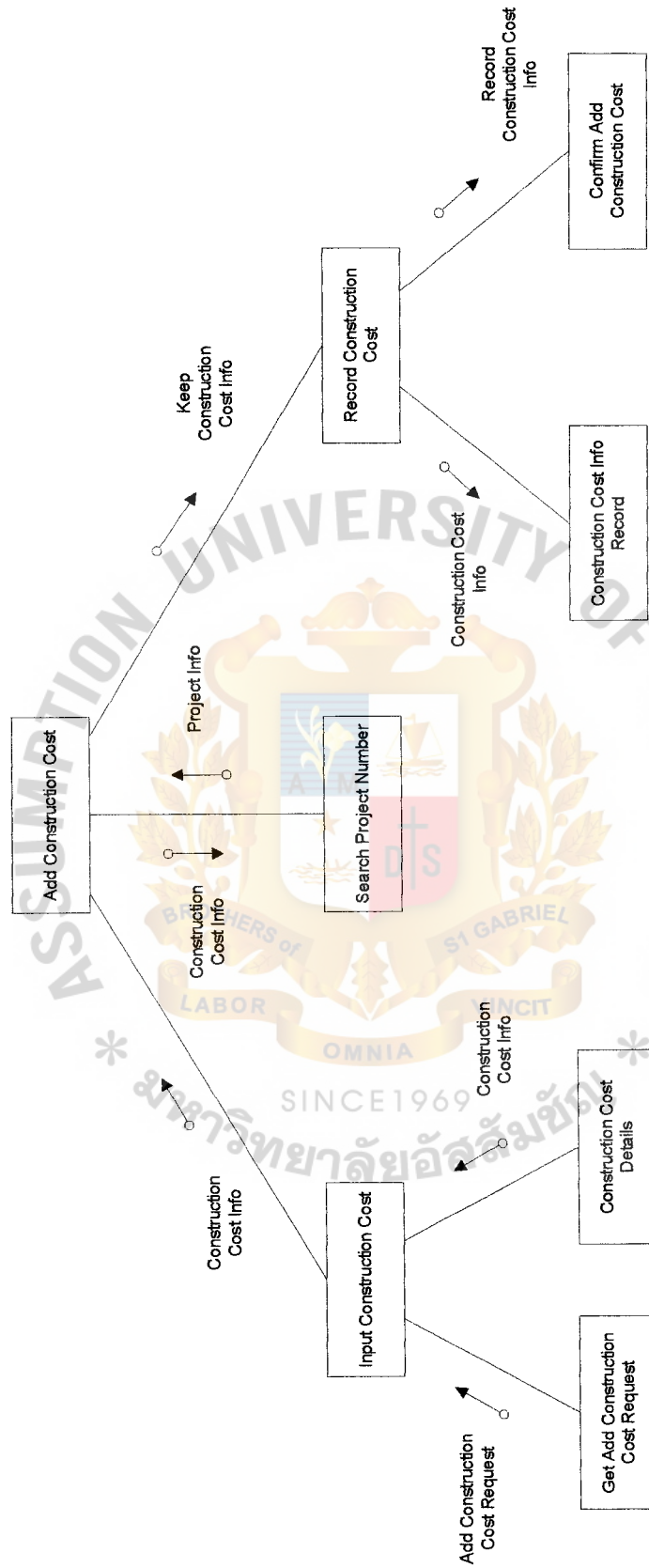


Figure 3.75. Structure Chart – Process Add Construction Cost of Construction Cost Subsystem.

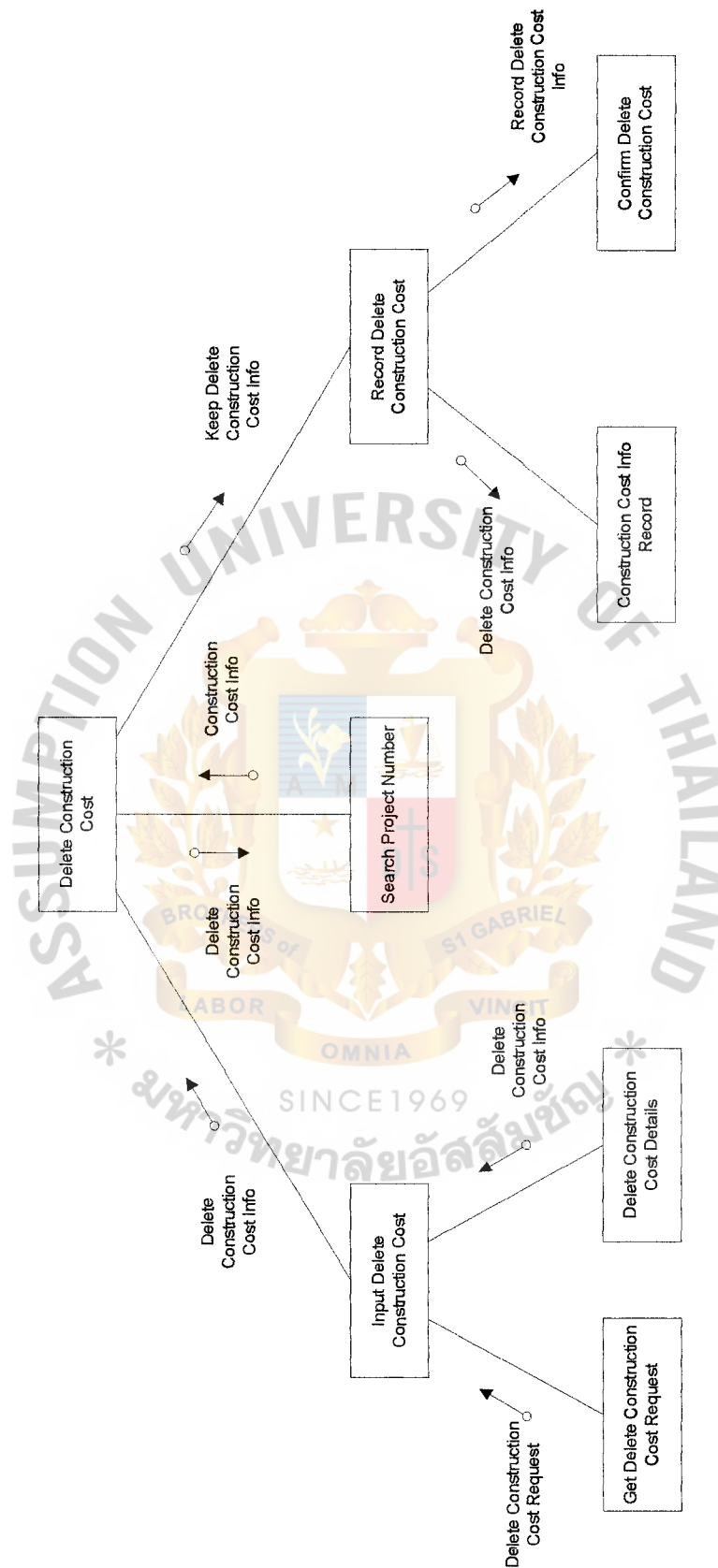


Figure 3.77. Structure Chart -- Process Update Construction Cost of Construction Cost Subsystem.

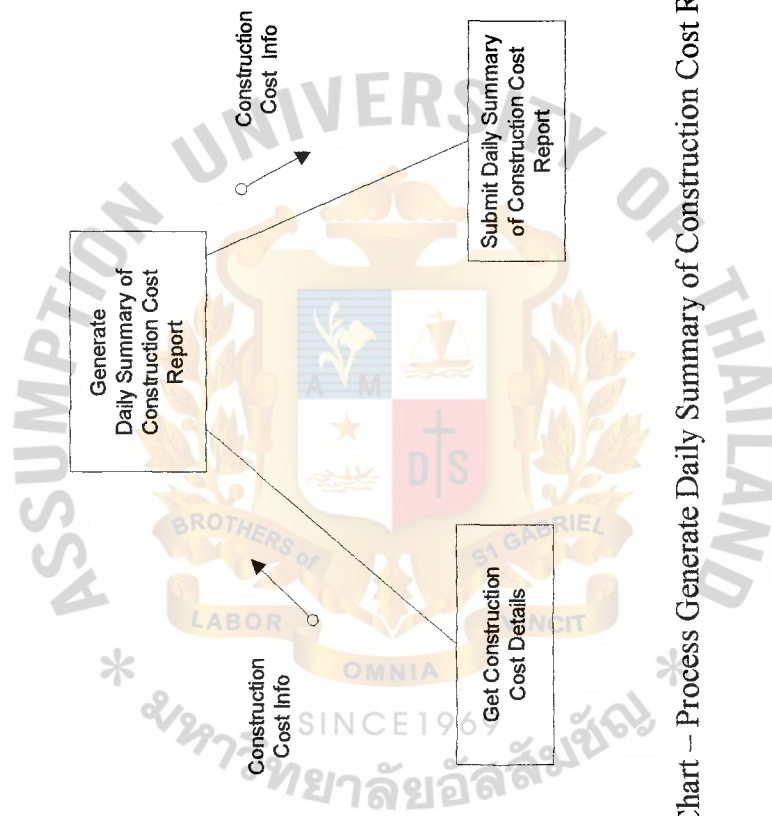


Figure 3.78. Structure Chart – Process Generate Daily Summary of Construction Cost Report of Report Subsystem.

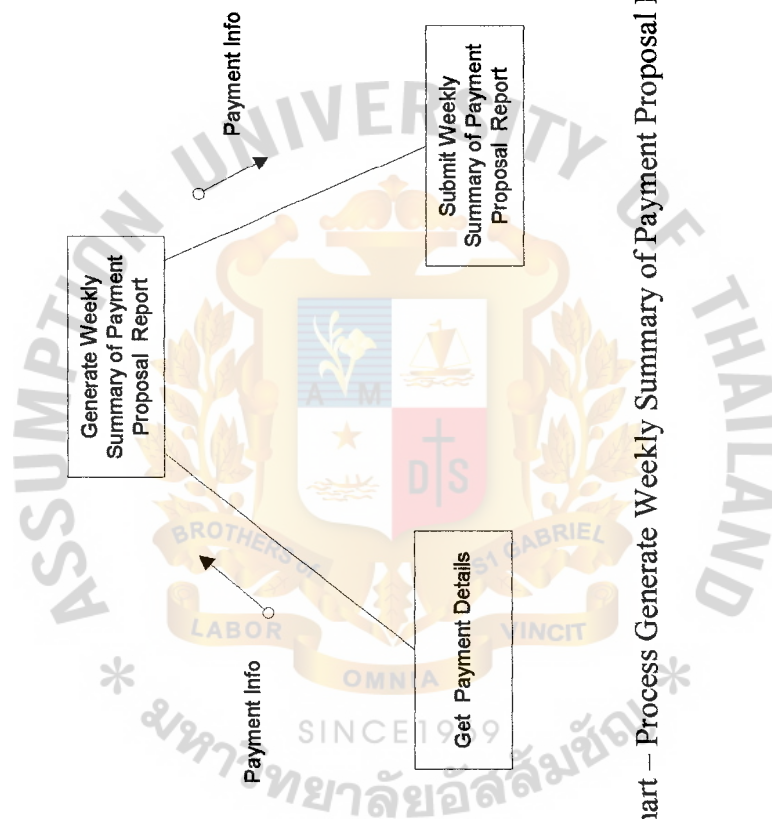


Figure 3.79. Structure Chart – Process Generate Weekly Summary of Payment Proposal Report of Report Subsystem.

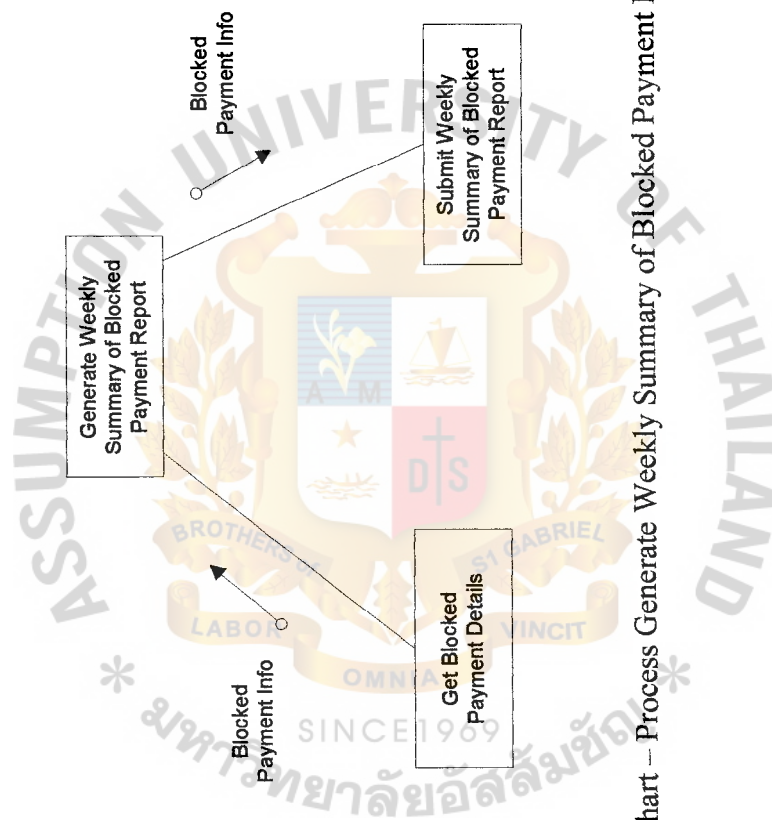


Figure 3.80. Structure Chart – Process Generate Weekly Summary of Blocked Payment Report of Report Subsystem.

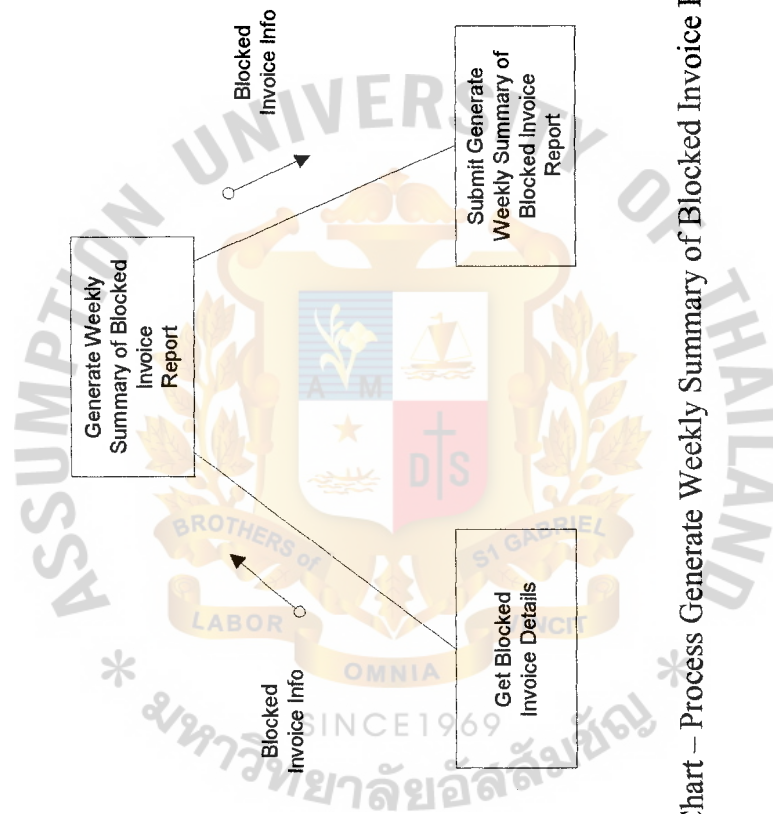


Figure 3.81. Structure Chart – Process Generate Weekly Summary of Blocked Invoice Report of Report Subsystem.

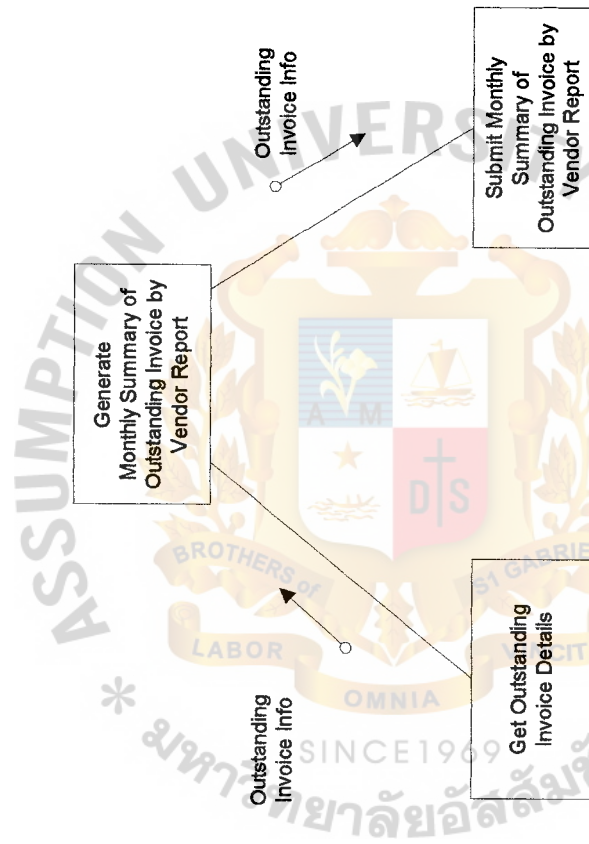


Figure 3.82. Structure Chart -- Process Generate Monthly Summary of Outstanding Invoice Report of Report Subsystem.

3.3 Database Design

In designing database of Accounts Payable System, we choose relational database model because of the following reasons.

- (1) They make a good communication tool between users and designers. The relational model represents data structure in a way that is readily understood by users and information system professionals. They do this by presenting a simple data structure, which can include values to assist explanations.
- (2) The relational model defines criteria in terms of normal form relations. Relations in this form do not have any redundancy and thus make it easier to maintain database consistency during system operations.
- (3) Data structures represented by relation can be readily converted to relational database management system and implemented directly on computers that support relational database management system.

The following diagrams represent database and record format design for Accounts Payable System.

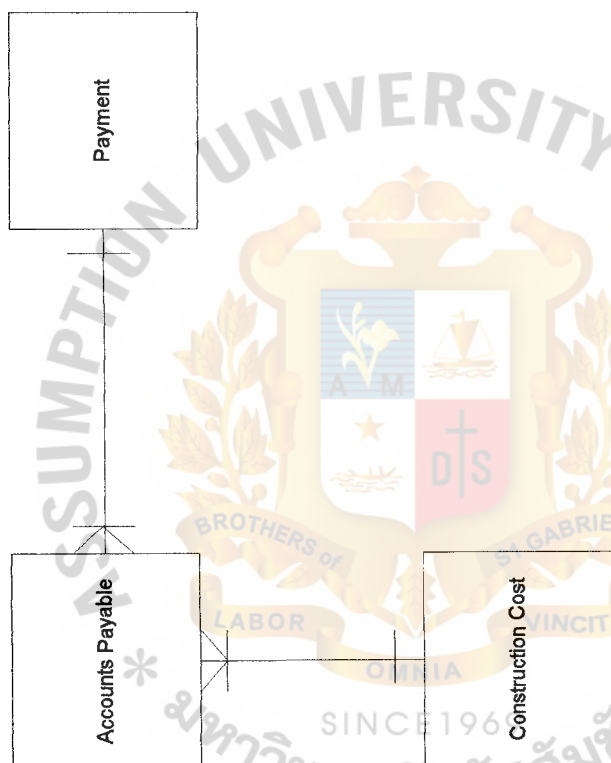


Figure 3.83. Database Schema.

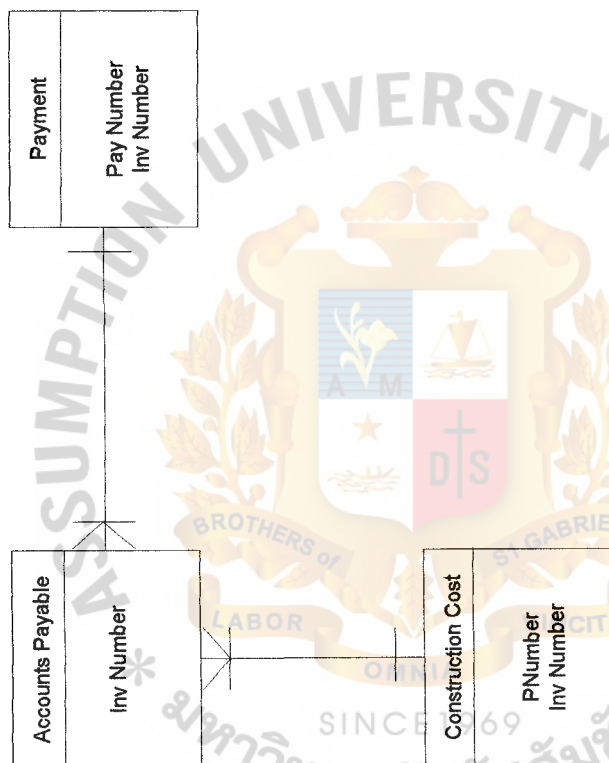


Figure 3.84. Key-Based Database Diagram.

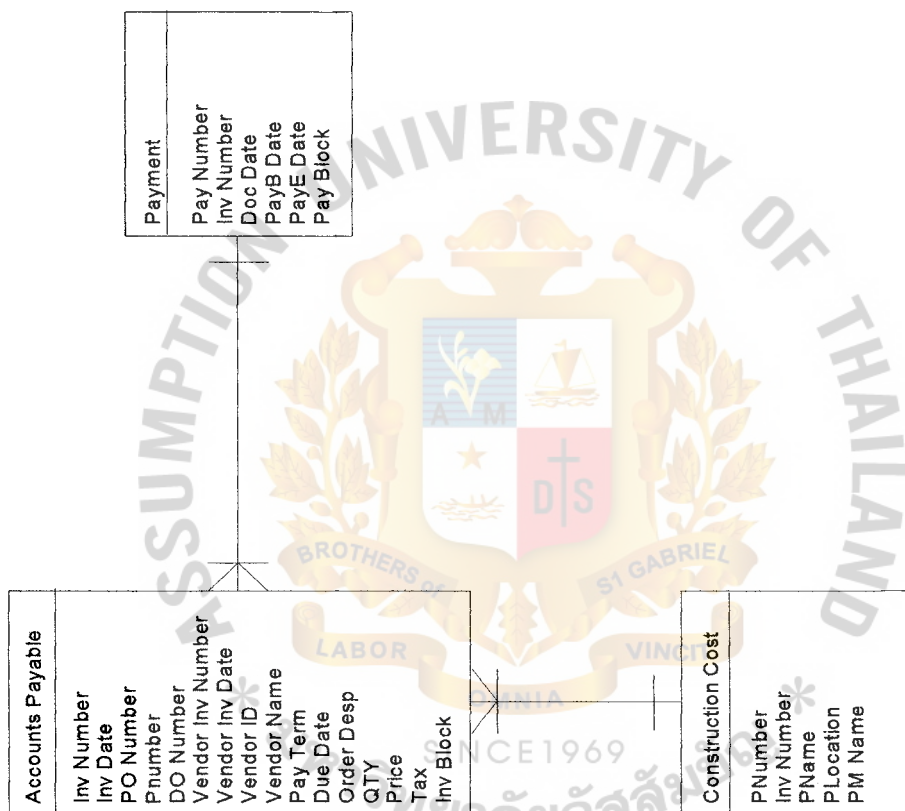


Figure 3.85. Attribute Database Diagram.

3.4 Hardware and Software Requirements

Table 3.1. Hardware and Software Specification.

Part	Description
Server:	
Processor	Pentium III 600 MHZ (2 Processors)
Memory	256 MB
Hard Disk	30 GB
CD-ROM	1 Unit
Tape Drive	DDS-3
Operating System	Windows NT 4.0 SP6
Application	MS Office 2000 Professional Microsoft Visual Basic 6.0 Norton AntiVirus 2001 Professional Arcserve 2000
Client:	
Processor	Intel Celeron 900 MHZ
Memory	128 MB
Hard Disk	10 GB
Operating System	Windows NT 4.0
Application	MS Office 2000 Professional Norton AntiVirus 2001 Professional
Peripheral:	
Dot Matrix Printer	Centronics Compatible 8-bit Parallel Standard
Laser Printer	Parallel Resolution 1200 x 1200 dpi Speed 15 ppm
UPS	Voltage 220+/-10% Backup Time 15-30, 500 VA

Table 3.1. Hardware and Software Specification (Continued).

Part	Description
Network:	
Hub	3COM 24 Port, 10/100 BASE-TX (RJ-45)
Router	3COM RJ-45 (4x10 BASE-T), RS-232 (1xWAN)
Switch	3COM 12-port 10/100 BASE-TX
LAN Card	3COM 10 BASE T Ethernet RJ-45
Tape Backup Drive	SCSI-2 24 GB 2 MB/s

The following picture illustrated the network architecture of the proposed system.

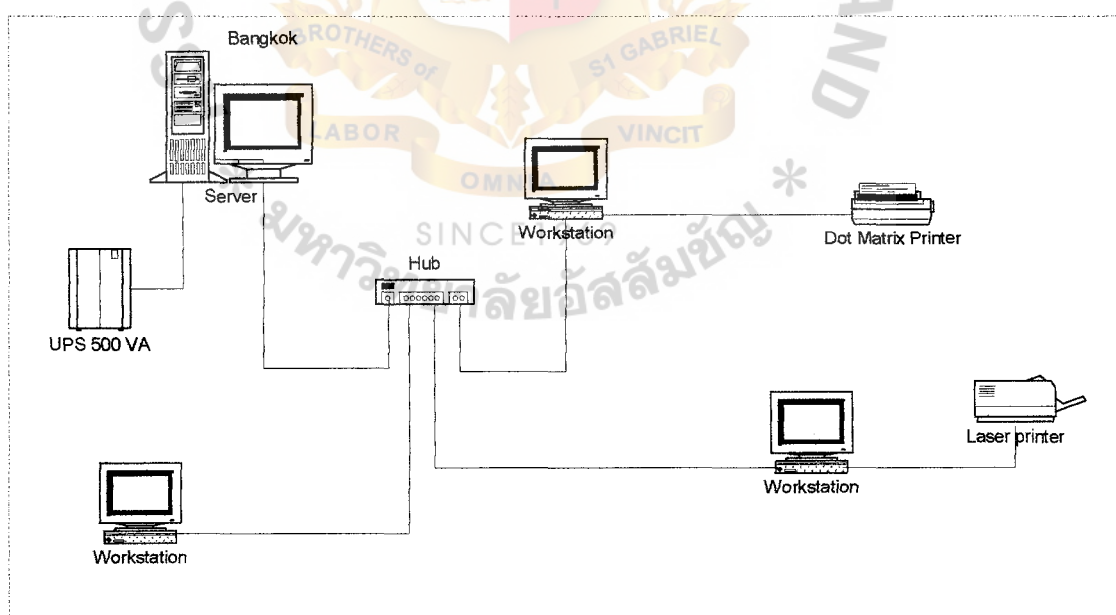


Figure 3.86. Network Infrastructure of the Proposed System.

3.5 Security and Control

One of the most important considerations in the development of system is security. The security methods that is implemented for Accounts Payable System are as follows:

3.5.1 Access Control

- (1) The user names (ID) and passwords are assigned to authorized persons.
When a user logs on, the system will ask for both user name and password.
- (2) The system will allow the user to log on the system only if that user ID and password are matched with the one that are known by the system.
- (3) The user ID and password can determine the privileges to the user. The system will allow performing of functions based on user privileges.

3.5.2 Physical Security

- (1) Staff have to backup the important information everyday in order to prevent undesirable events such as damage in the hard disk.
- (2) Data correction must be made immediately after recovering errors.
- (3) A virus-checking program must be installed for checking the virus before running the program and updated every 6 months.

3.6 System Cost Analysis

3.6.1 Cost of Manual System

The following table illustrates cost analysis of the manual system.

Table 3.2. Cost Analysis of Manual System, Baht.

Cost Items	Year 1	Year 2	Year 3	Year 4	Year 5
Salary:					
– Accounting manager 1 person @ 70,000	70,000.00	80,500.00	92,575.00	106,461.25	122,430.34
– Accounts Payable Supervisor 2 persons @ 25,000	50,000.00	57,500.00	66,125.00	76,043.75	87,450.31
– Accounts Payable Staff 3 persons @ 12,000	36,000.00	41,400.00	47,610.00	54,751.50	62,964.23
Office Supplies & Miscellaneous Cost (Per Annual):					
– Stationery	11,000.00	12,100.00	13,310.00	14,641.00	16,105.10
– Preprinted form	100,000.00	120,000.00	144,000.00	172,800.00	207,360.00
– Paper	50,000.00	60,000.00	72,000.00	86,400.00	103,680.00
– Utility	15,000.00	16,500.00	18,150.00	19,965.00	21,961.50
– Miscellaneous	5,000.00	5,500.00	6,050.00	6,655.00	7,320.50
Total cost	337,000.00	393,500.00	459,820.00	537,717.50	506,841.64
Accumulated cost	337,000.00	730,500.00	1,190,320.00	1,728,037.50	2,234,879.14

3.6.2 Cost of Computerized System

Table 3.3. Cost Analysis of Computerized System, Baht.

Cost Items	Year 1	Year 2	Year 3	Year 4	Year 5
Fixed Cost:					
- Hardware cost					
• Server	24,000.00	24,000.00	24,000.00	24,000.00	24,000.00
• Personnel Computer	3,980.00	3,980.00	3,980.00	3,980.00	3,980.00
• UPS	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
• Printer	2,200.00	2,200.00	2,200.00	2,200.00	2,200.00
• Maintenance Cost	-	10,000.00	10,000.00	10,000.00	10,000.00
- Software cost					
• Operating System	9,000.00	9,000.00	9,000.00	9,000.00	9,000.00
• Development Software	6,000.00	6,000.00	6,000.00	6,000.00	6,000.00
• PC Software	4,400.00	4,400.00	4,400.00	4,400.00	4,400.00
• Anti Virus Software	2,600.00	2,600.00	2,600.00	2,600.00	2,600.00
- Network cost					
• Router	3,080.00	3,080.00	3,080.00	3,080.00	3,080.00
• Maintenance Cost	-	7,000.00	7,000.00	7,000.00	7,000.00
System Implementation Cost:					
- Development cost	45,000.00	-	-	-	-
- Training cost	20,000.00	-	-	-	-
- Setup cost	10,000.00	-	-	-	-
Salary:					
- Accounting manager 1 person @ 70,000	70,000.00	80,500.00	92,575.00	106,461.25	122,430.34

Table 3.3. Cost Analysis of Computerized System, Baht (Continued).

Cost Items	Year 1	Year 2	Year 3	Year 4	Year 5
– Accounts Payable Supervisor 2 persons @ 25,000	50,000.00	57,500.00	66,125.00	76,043.75	87,450.31
– Accounts Payable Staff 3 persons @ 12,000	36,000.00	41,400.00	47,610.00	54,751.50	62,964.23
Office Supplies & Miscellaneous Cost (Per Annual):					
– Stationery	7,000.00	7,500.00	8,000.00	8,500.00	9,000.00
– Paper	50,000.00	55,000.00	60,500.00	66,550.00	73,205.00
– Utility	12,000.00	12,000.00	12,000.00	12,000.00	12,000.00
– Miscellaneous	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00
Total cost	359,260.00	330,160.00	363,070.00	400,566.50	320,879.54
Accumulated cost	359,260.00	689,420.00	1,052,490.00	1,453,056.50	1,773,936.04

Table 3.4. Accumulated Cost of Manual and Computerized System, Baht.

Year	Accumulated Manual System Cost	Accumulated Computerized System Cost
1	337,000.00	359,260.00
2	730,500.00	689,420.00
3	1,190,320.00	1,052,490.00
4	1,728,037.50	1,453,056.50
5	2,234,879.14	1,773,936.04

3.7 Benefit Analysis

As can be seen in the Table 3.4., the proposed system begin to save up the operation cost about 41,080.00 baht in the second year, 137,830.00 baht in the third year, 275,011.00 baht the forth year and 460,943.10 baht the fifth year. Although initially cost of the proposed system in the first year is higher. However, there are additional intangible benefits which arose from the proposed system as follows:

- (1) Providing timely, up-to-date, accurate information/reports to support decision-making of management.
- (2) Reduction of data and process redundancy. Employees can work easily and increase speed of doing daily operation.
- (3) Reducing human errors in performing functions.
- (4) Providing better communication between business units.

3.8 Payback Analysis

The followings are payback period analysis for the proposed system.

Table 3.5. Comparison of the System Cost, Baht.

Cost Items	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Development cost	-359,900.00	-	-	-	-	-
Operation & maintenance cost	-	-228,000.00	-273,900.00	-306,810.00	-344,306.50	-264,619.54
Discount factors for 12%	1.00	0.89	0.80	0.71	0.64	0.57
Time-adjusted costs (adjusted to present value)	-359,900.00	-203,604.00	-218,298.30	-218,448.72	-218,978.93	-150,039.28
Cumulative time-adjusted costs over lifetime	-359,900.00	-563,504.00	-781,802.30	-1,000,251.02	-1,219,229.95	-1,369,269.23
Benefits derived from operation of new system		455,000.00	465,000.00	485,000.00	505,000.00	515,000.00
Discount factors for 12%	1.00	0.89	0.80	0.71	0.64	0.57
Time-adjusted costs (adjusted to present value)		406,315.00	370,605.00	345,320.00	321,180.00	292,005.00
Cumulative time-adjusted benefits over lifetime		406,315.00	776,920.00	1,122,240.00	1,443,420.00	1,735,425.00
Cumulative lifetime time-adjusted cost + benefit	-359,900.00	-157,189.00	-4,882.30	121,988.98	224,190.05	366,155.77

As can be seen in the Table 3.5., the lifetime costs are gradually increasing over the five-year period. However, the lifetime benefits are accruing at a much faster pace. The lifetime benefits will overtake the lifetime costs between year 2 and year 3. By plotting the cumulative lifetime time-adjusted costs and benefits, we can estimate that the break-even point will occur approximately 2.1 years after the system begins operating.

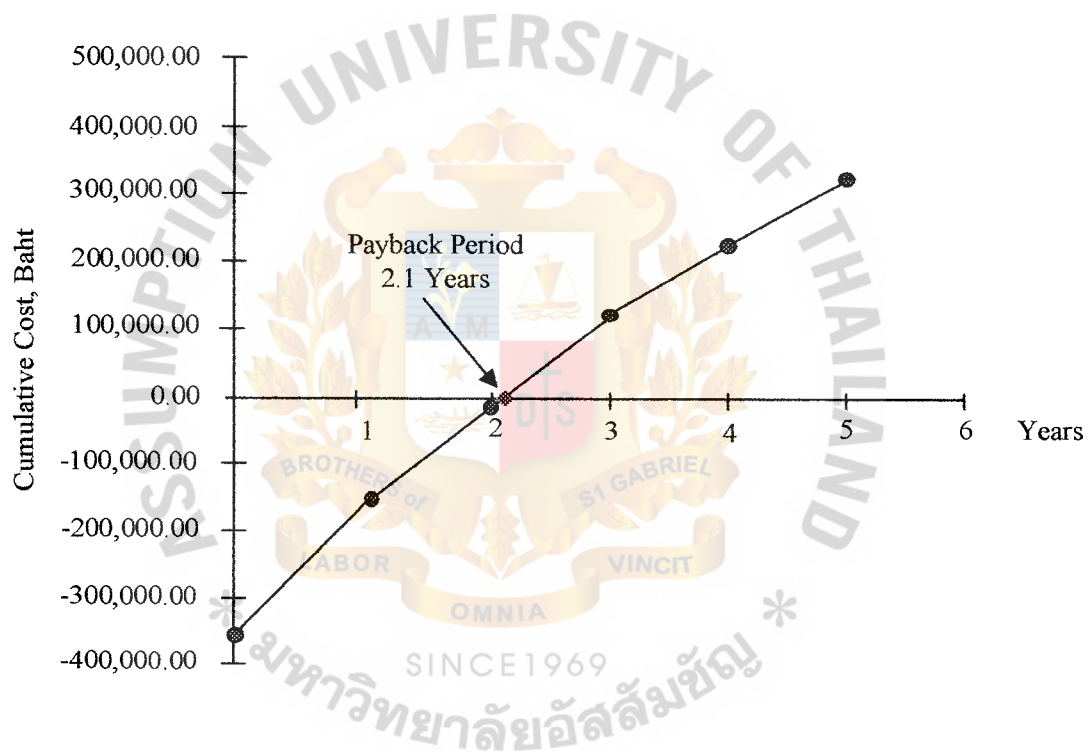


Figure 3.87. Payback Analysis Chart.

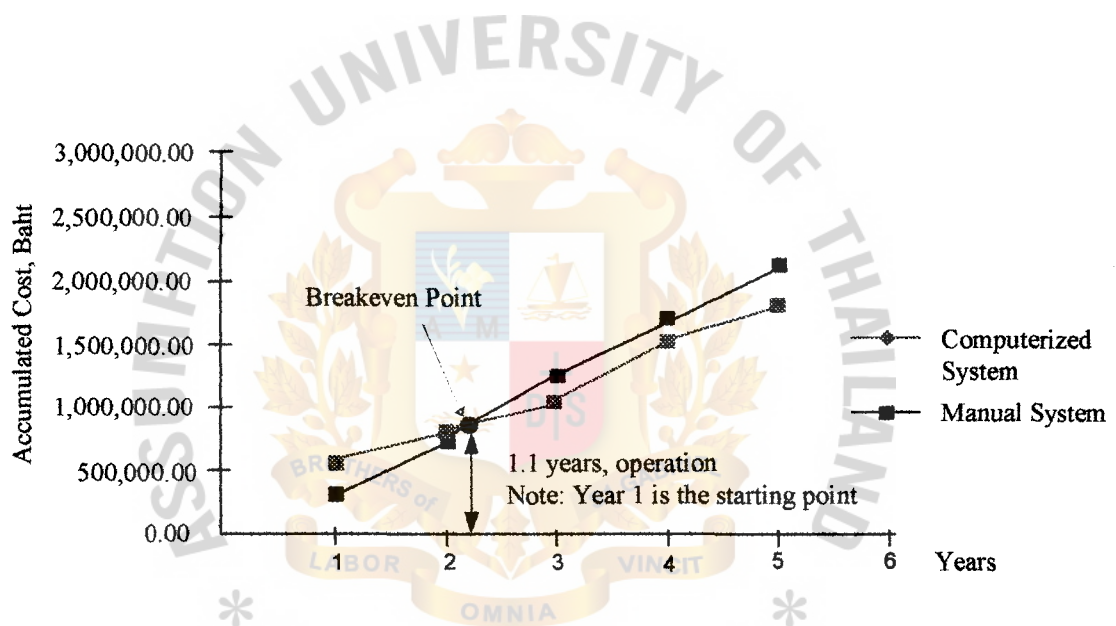


Figure 3.88. Breakeven Analysis Chart.

IV. PROJECT IMPLEMENTATION

According to the project schedule shown in Figure 4.1, there are two main activities in the project implementation, which are system testing and user training.

4.1 System Testing

(1) Network Testing

The computer staff will test the new computer network after it was built to the network design requirements. The activity can be summarized as follows.

- (a) Review the network design requirements that are stated in the network architecture developed during system design.
- (b) Construct and then test the new network.
- (c) Revise network specifications for future reference.

(2) Database Testing

This task must be immediately developed before programming activities because database is the resource shared by application programs.

- (a) Review the database design requirements that are stated in the technical design statement.
- (b) Locate production database that may contain sample data for testing.
- (c) Build database per design specifications.
- (d) Load table with sample data.
- (e) Revise database schema and store for future reference.

(3) Program Testing

Program testing will be done after the entire program has been written. The activities can be summarized as follows:

- (b) Write and document programs and perform unit testing.
- (c) Review program document.
- (d) Conduct system testing to make sure that all programs work properly.
If the program does not work properly or produce incorrect or unsatisfactory output, the programmer must debug or rewrite the programs and then test it again until it gives the correct output.
- (e) Update the project repository with the revised program document for future reference.
- (f) Place the new programs and reusable components in the software library.

4.2 User Training

Converting to the new system, it is necessary for the system users to be trained. The system document (user manual) is also given to the users to guide them how to use the new system. The training activities can be summarized as follows:

- (1) Collect all documents that are useful to develop the user manual.
- (2) Prepare user manual that are easy to understand.
- (3) Review the training documents.
- (4) Schedule training sessions.
- (5) Conduct training sessions and distribute user documents.

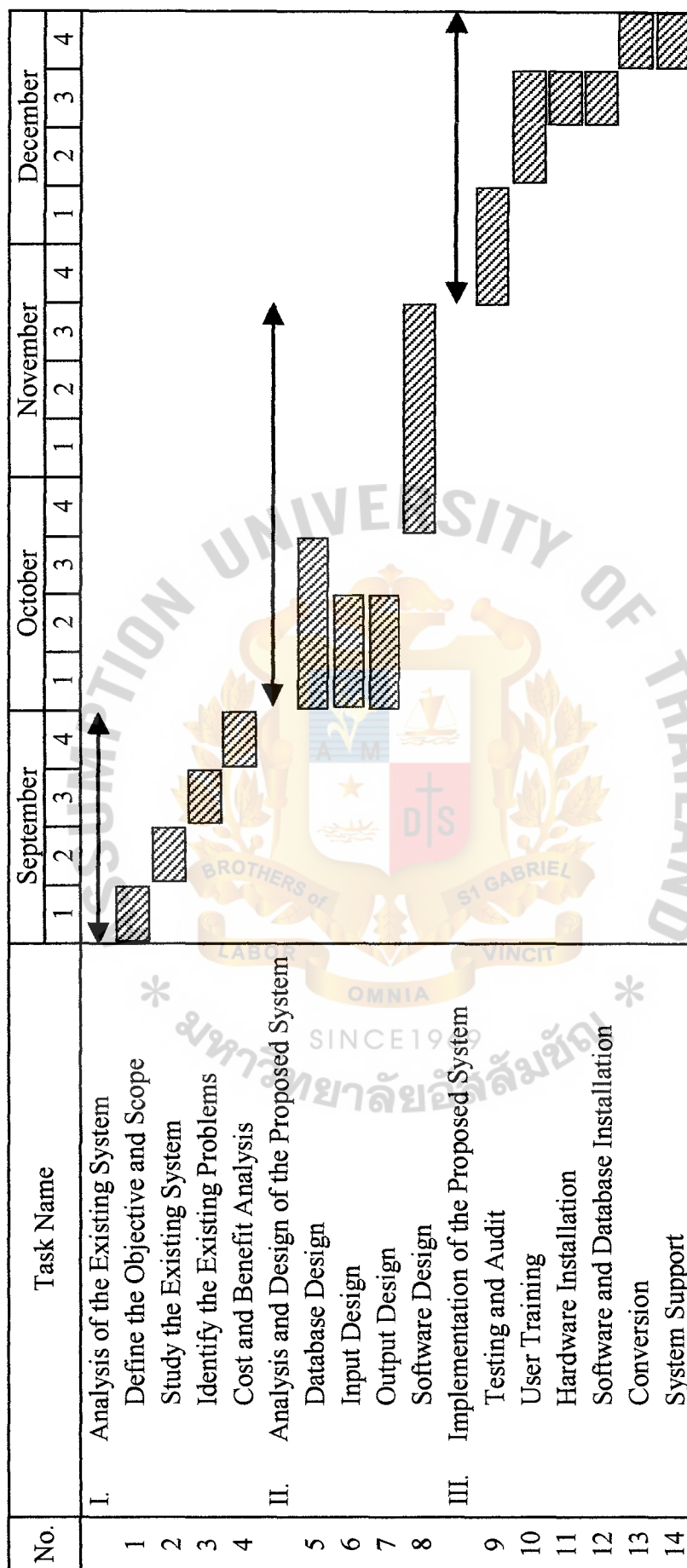


Figure 4.1. Project Implementation Schedule.

V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Since the operation of the existing system is done manually, the proposed system introduces it to computerize the operation and make it online. The new system will improve accounts payable functions to operate efficiently.

Initially, the investment of computerized system is high but the system provides effectiveness and efficiency to the accounts payable functions. According to the system capabilities in processing speed and accuracy, company can save more time and cost. The new system also provides more access and security to the information in the system.

System testing is conducted both by the developers and the users. Since this can ensure that the new system will operate according to the users's expectation. System training is also made available in order to make user familiar to the new system. The new system has been developed with the concern of user friendly so that it can be easy to learn by the users.

Finally, company can gain benefits from using the computerized system to perform the accounts payable functions. Management can access and be provided with the information for making decisions faster and better. Users can accomplish their works more easily and accuracy.

Table 5.1 shows the time performance on each process of the proposed system compared with the existing system. It shows that each process of the proposed system performs less time than each process of the existing system which has to operate many work steps in manual system. So, it can be concluded 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
Accounts Payable Process	30 mins.	15 mins.
Construction Cost Process	30 mins.	10 mins.
Payment Process	30 mins.	10 mins.
Report Process	60 mins.	10 mins.

As can be seen from Table 5.1, time processing of the proposed system is significantly reduced compare to the existing system. Since the existing system is performed manually then it consumes more time than the computerized system.

5.2 Recommendations

In order to make the proposed system more beneficial in the future, the following are recommended.

- (1) The system should be expanded to integrate with purchasing system. This will be eliminate the manual operations which information from purchasing system will be re-keyed to Accounts Payable system for recording accounts payable transaction.
- (2) The company should consider to apply online payment system for handling payment transaction. The online payment system will eliminate the process to prepare cheque manually. Payment instructions will direct to the contracted bank and the bank will distribute payment to vendors according to the instructions.



APPENDIX A

USER INTERFACE DESIGN

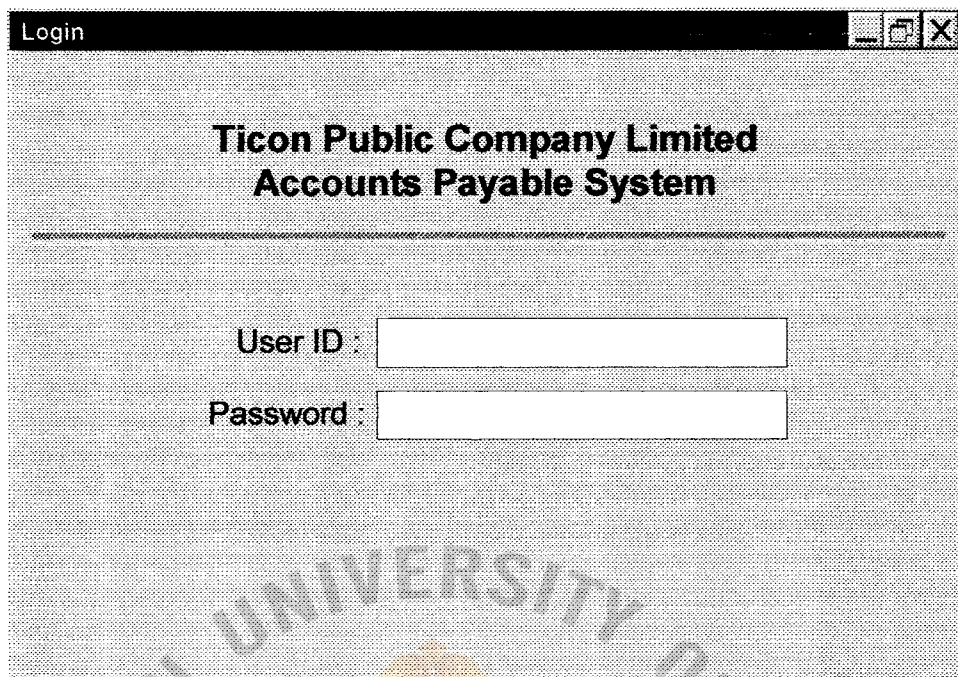


Figure A.1. User Login Screen.

Each user will be assigned a unique user id and password for working with the system. This promotes system security in which that each of the transaction can be identified who did perform it. In addition, user id and password is a basic security to protect system from unauthorized users or intruders. Users will also be classified into level in order to restrict authorizations. Super user can perform any transactions whereas normal users can perform only the transaction that they are authorized. In this system, Accounting Manager and is assigned super user ID. We also assign separate authorization between accounts payable function and payment function in order to provide mean of segregation of duties.

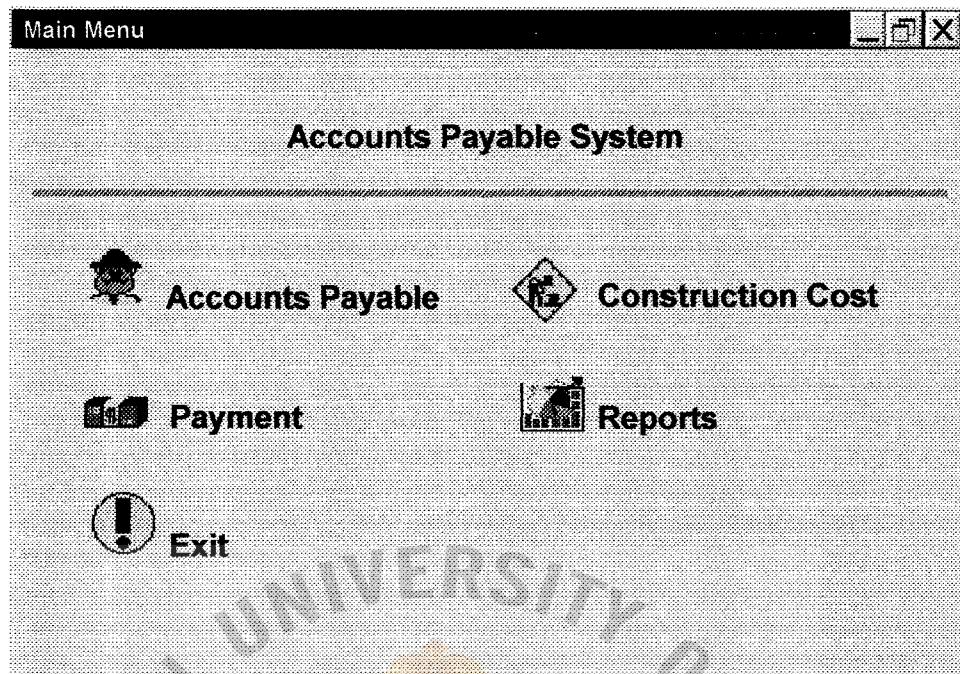


Figure A.2. Main Menu.

After successful login, the main menu screen will be appeared for user to select the system functions. User can select only the menu that relate to their responsibilities.

Accounts Payable

Document No. Document Date:

PO No. Project No.

Invoice No. Invoice Date:

Vendor ID: Vendor Name:

Term: Due Date:

Quantity: Unit Price:

Amount: Tax:

Description:

Block: ☒

Documnet No.	Date	PO No.	Project No.	Invoice No.	Invoice Date

Record: 1 of 1

Add Change Delete Save Exit

Figure A.3. Accounts Payable Screen.

The system will automatically generate the document number for each new invoice added, after that user must enter data for all displayed fields which are not shaded. User is not required to complete the shaded fields since they will automatically assign or display by system. User can also change, block and delete invoice data on this screen.

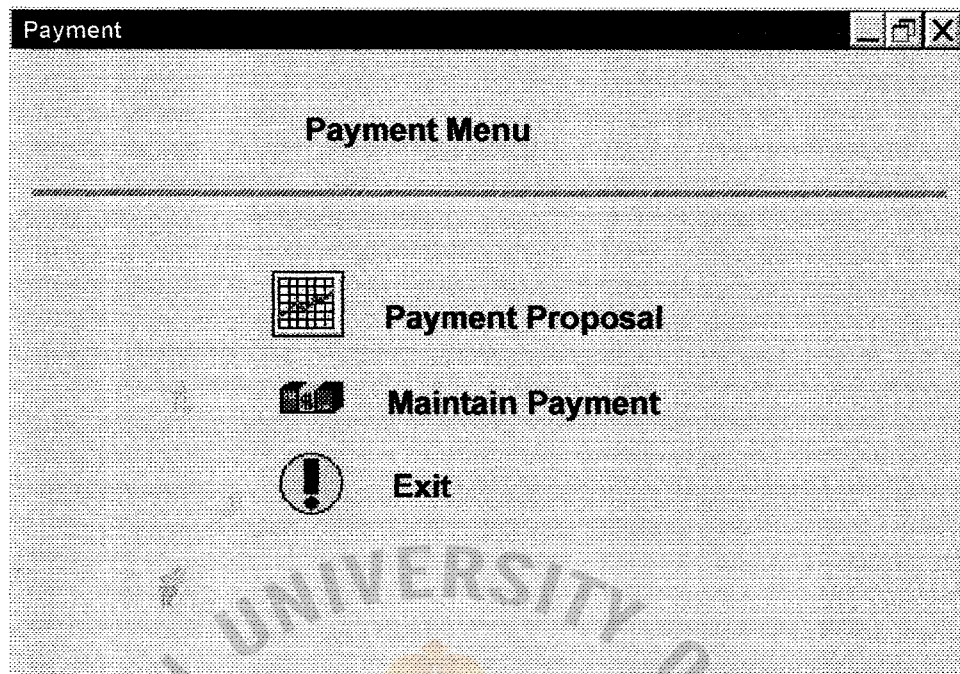
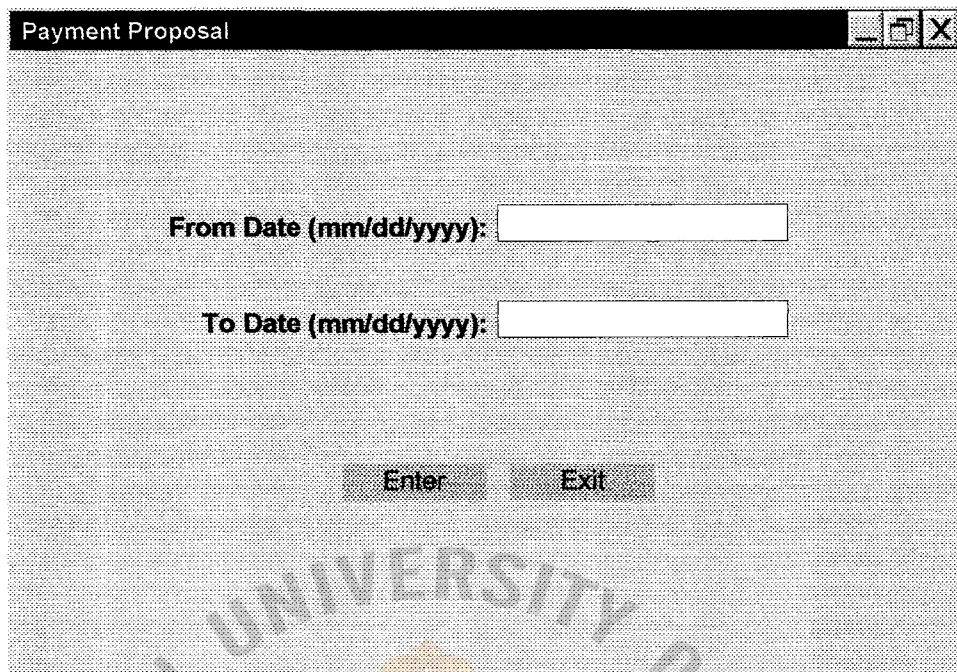


Figure A.4. Payment Menu.

Only users with payment authorization can access this screen. The payment module is consisted of generate payment proposal and maintain payment data.



Payment Proposal

From Date (mm/dd/yyyy):

To Date (mm/dd/yyyy):

Enter Exit

Figure A.5. Payment Proposal Screen.

After user select payment proposal menu, this screen will be appeared. User must specify the required date for system to run payment data. These date is meaning for payment due date. Normally, this screen will be run once a week according to the payment policy of company.

Maintain Payment

Document No.: Document Date.:

From Due Date: To Due Date.:

No.	Invoice No.	Invoice Date	Due Date	Amount	Vendor ID	Vendor Name	Block	APV

Record: 1 of 1

Figure A.6. Maintain Payment Screen.

This screen will be appeared when user select the maintain payment menu. We assign only the super user ID can access to this acreen since it will be used for block or approve payment data. The user must specify the document number which they require to block or approve, other fields will be displayed automatically after user fill the correct document number. All approved payment will be included in payment proposal report that is submitted to finance department to prepare cheque for vendor. The blocked payment will be reported to Accounting Manager every week on blocked payment report.

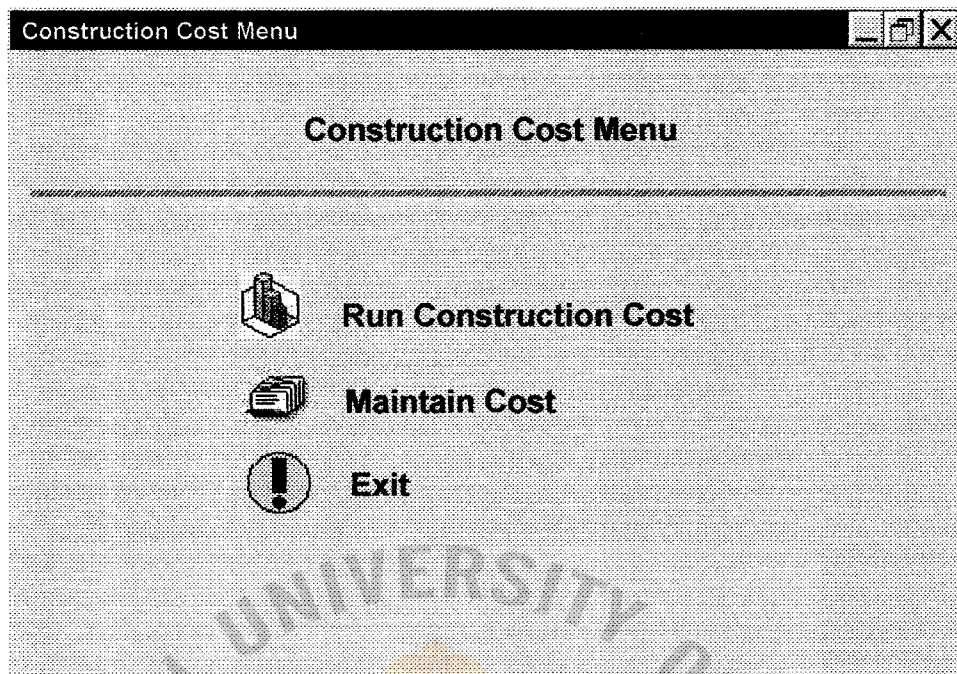
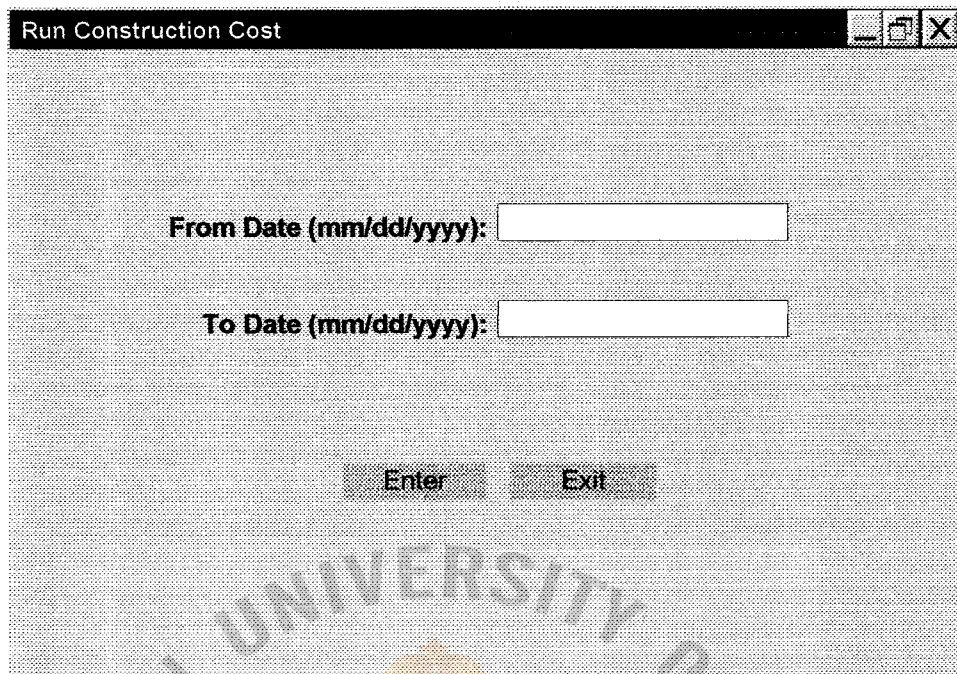


Figure A.7. Construction Cost Menu.

Only users with construction cost authorization can access this screen. The construction cost module is consisted of run construction cost and maintain construction cost data.



Run Construction Cost

From Date (mm/dd/yyyy):

To Date (mm/dd/yyyy):

Enter Exit

Figure A.8. Run Construction Cost Screen.

After user select run cost menu, this screen will be appeared. User must specify the required date for system to run cost data. Normally, this screen will be run everyday in order to submit construction cost control report to Project department.

Project No. Project Name:

Location: PM Name:

Total Cost:

PO No.	Invoice No.	Invoice Date	Order Description	QTY	Cost

Record: 1 of 1

Change Delete Save Exit

Figure A.9. Maintain Cost Screen.

This screen will be appeared when user select the maintain cost menu. We assign only the super user ID can access to maintain cost data. The user must specify the project number which they require to maintain, other fields will be displayed automatically after user fill the correct project number. Cost data can be changed, block and delete on this screen.

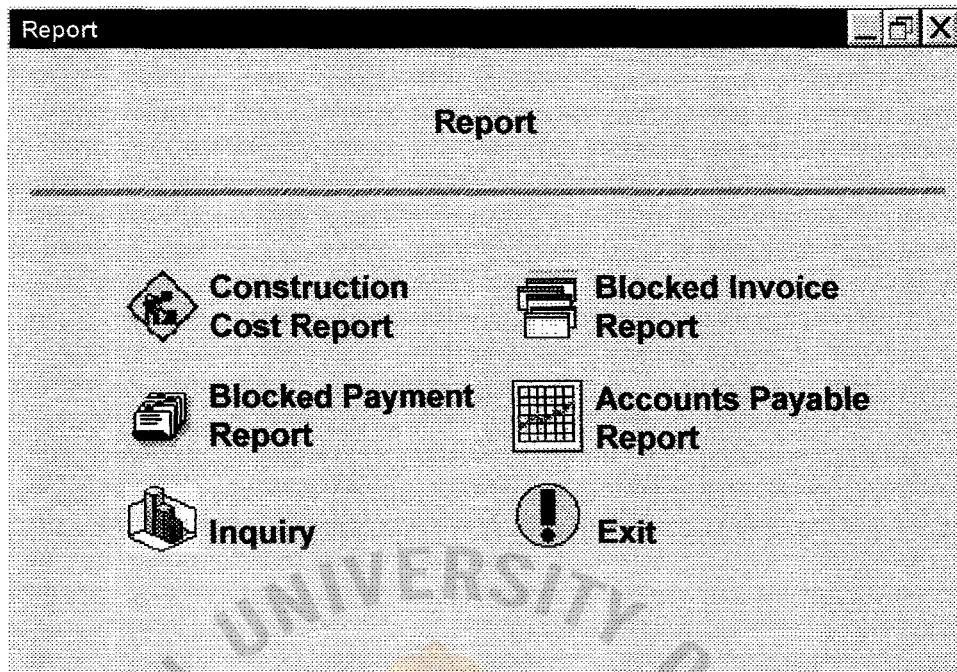


Figure A.10. Report Menu.

The system provides many reports for management and users. They will be used to support routine operation and for analytical.



Ticon Public Company Limited.						
Daily Summary of Construction Cost Report						
1 June 2002						
Project Number:	0000000001	Project Name:		Factory		
Project Location:	Rayong	Project Manager:		Mr. Komkrit L.		
PO Number	Invoice Number	Invoice Date	Order Description	Qty	Cost	
PUR0000000001	INV00000000001	01/06/2002	Aluminium Door & Window Work	1	438,603.10	
PUR0000000002	INV00000000002	01/06/2002	Hanger Bolts	1	10,102.75	
Total					448,705.85	
Project Number:	0000000002	Project Name:		Factory		
Project Location:	Bangkok	Project Manager:		Mr. Komkrit L.		
PO Number	Invoice Number	Invoice Date	Order Description	Qty	Cost	
PUR0000000003	INV00000000003	01/06/2002	Aluminium Door & Window Work	1	438,603.10	
PUR0000000004	INV00000000004	01/06/2002	Hanger Bolts	1	10,102.75	
Total					448,705.85	
Grand Total					897,411.70	

Figure B 1. Daily Summary of Construction Cost Report.

Ticon Public Company Limited.						
Weekly Summary of Payment Proposal Report						
Payment Due 14 June 2002 to 18 June 2002						
Payment Batch No.:		0000000001				
Vendor ID:		0000000001				
		Vendor Name: K.SUNAN SUKSIRI				
Invoice Number	Invoice Date	Due Date	Amount	Tax	Net Amount	
250502-1	10/05/2002	16/06/2002	30,000.00	2,100.00	32,100.00	
206116-1	11/05/2002	18/06/2002	10,500.00	735.00	11,235.00	
206117-1	20/05/2002	16/06/2002	12,042.00	842.94	12,884.94	
Total			52,542.00	3,677.94	56,219.94	
Vendor ID:		0000000002				
		Vendor Name: C&A COMPUTER				
Invoice Number	Invoice Date	Due Date	Amount	Tax	Net Amount	
176/2545-1	15/05/2002	16/06/2002	6,544.00	458.08	7,002.08	
177/2545-1	17/05/2002	16/06/2002	71,476.00	5,003.32	76,479.32	
Total			78,020.00	5,461.40	83,481.40	
Grand Total			130,562.00	9,139.34	139,701.34	

Figure B.2. Weekly Summary of Payment Proposal Report.

Ticon Public Company Limited.						
Weekly Summary of Blocked Payment Report						
14 June 2002 to 18 June 2002						
Vendor ID: 0000000001		Vendor Name: K.SUNAN SUKSIRI				
Invoice Number	Invoice Date	Due Date	Net Amount	Block (Y/N)		
250502-1	10/05/2002	16/06/2002	32,100.00	Y		
206116-1	11/05/2002	18/06/2002	11,235.00	Y		
206117-1	20/05/2002	16/06/2002	12,884.94	Y		
Total			56,219.94			
Vendor ID: 0000000002		Vendor Name: C&A COMPUTER				
Invoice Number	Invoice Date	Due Date	Net Amount	Block (Y/N)		
176/2545-1	15/05/2002	16/06/2002	7,002.08	Y		
177/2545-1	17/05/2002	16/06/2002	76,479.32	Y		
Total			83,481.40			
Grand Total			139,701.34			

Figure B.3. Weekly Summary of Blocked Payment Report.

Ticon Public Company Limited.					
Weekly Summary of Blocked Invoice Report					
14 June 2002 to 18 June 2002					
Vendor ID: 0000000003		Vendor Name: K.SURIYA			
PO Number	Invoice Number	Invoice Date	Net Amount	Block (Y/N)	
PUR0000000001	250502-1	10/05/2002	32,100.00	Y	
PUR0000000002	206116-1	11/05/2002	11,235.00	Y	
PUR0000000003	206117-1	20/05/2002	12,884.94	Y	
Total			56,219.94		
Vendor ID: 0000000004		Vendor Name: DAINICHI (COLOR)			
PO Number	Invoice Number	Invoice Date	Net Amount	Block (Y/N)	
PUR0000000004	176/2545-1	15/05/2002	7,002.08	Y	
PUR0000000005	177/2545-1	17/05/2002	76,479.32	Y	
Total			83,481.40		
Grand Total			139,701.34		

Figure B.4. Weekly Summary of Blocked Invoice Report.

Ticon Public Company Limited.						
Monthly Summary of Outstanding Invoice By Vendor Report						
June 2002						
Vendor ID:	0000000001	Vendor Name: K.SUNAN SUKSIRI				
Invoice Number	Invoice Date	Due Date	Amount	Tax	Net Amount	
250510-2	27/06/2002	26/07/2002	30,000.00	2,100.00	32,100.00	
206126-2	28/06/2002	27/07/2002	10,500.00	735.00	11,235.00	
206127-2	29/06/2002	28/07/2002	12,042.00	842.94	12,884.94	
Total			52,542.00	3,677.94	56,219.94	
Vendor ID:	0000000002	Vendor Name: C&A COMPUTER				
Invoice Number	Invoice Date	Due Date	Amount	Tax	Net Amount	
186/2545-1	30/06/2002	28/07/2002	6,544.00	458.08	7,002.08	
188/2545-1	30/06/2002	28/07/2002	71,476.00	5,003.32	76,479.32	
Total			78,020.00	5,461.40	83,481.40	
Grand Total			130,562.00	9,139.34	139,701.34	

Figure B.5. Monthly Summary of Outstanding Invoice by Vendor Report.



APPENDIX C
DATABASE DESIGN

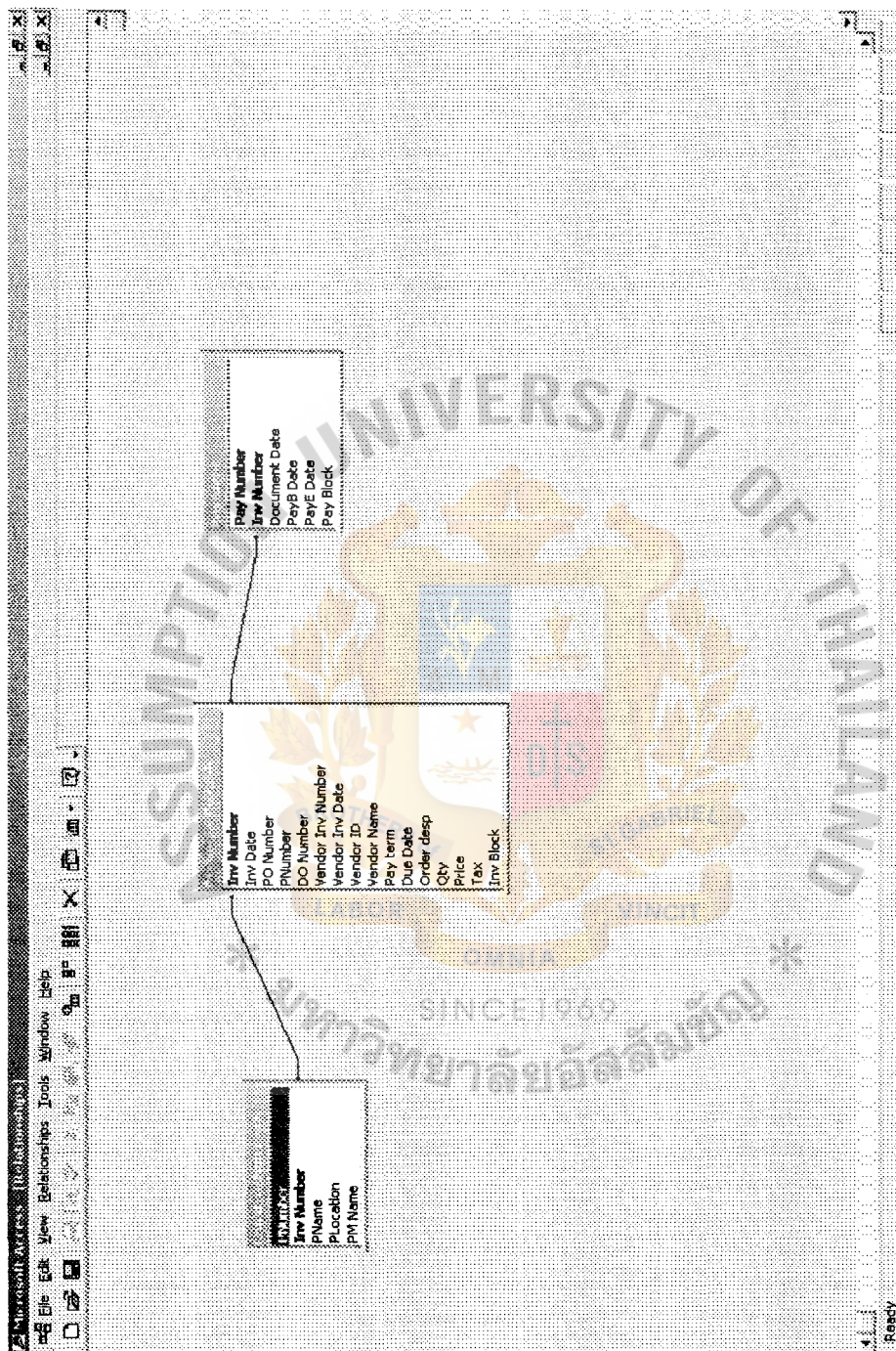


Figure C.1. Microsoft Access Database Design.

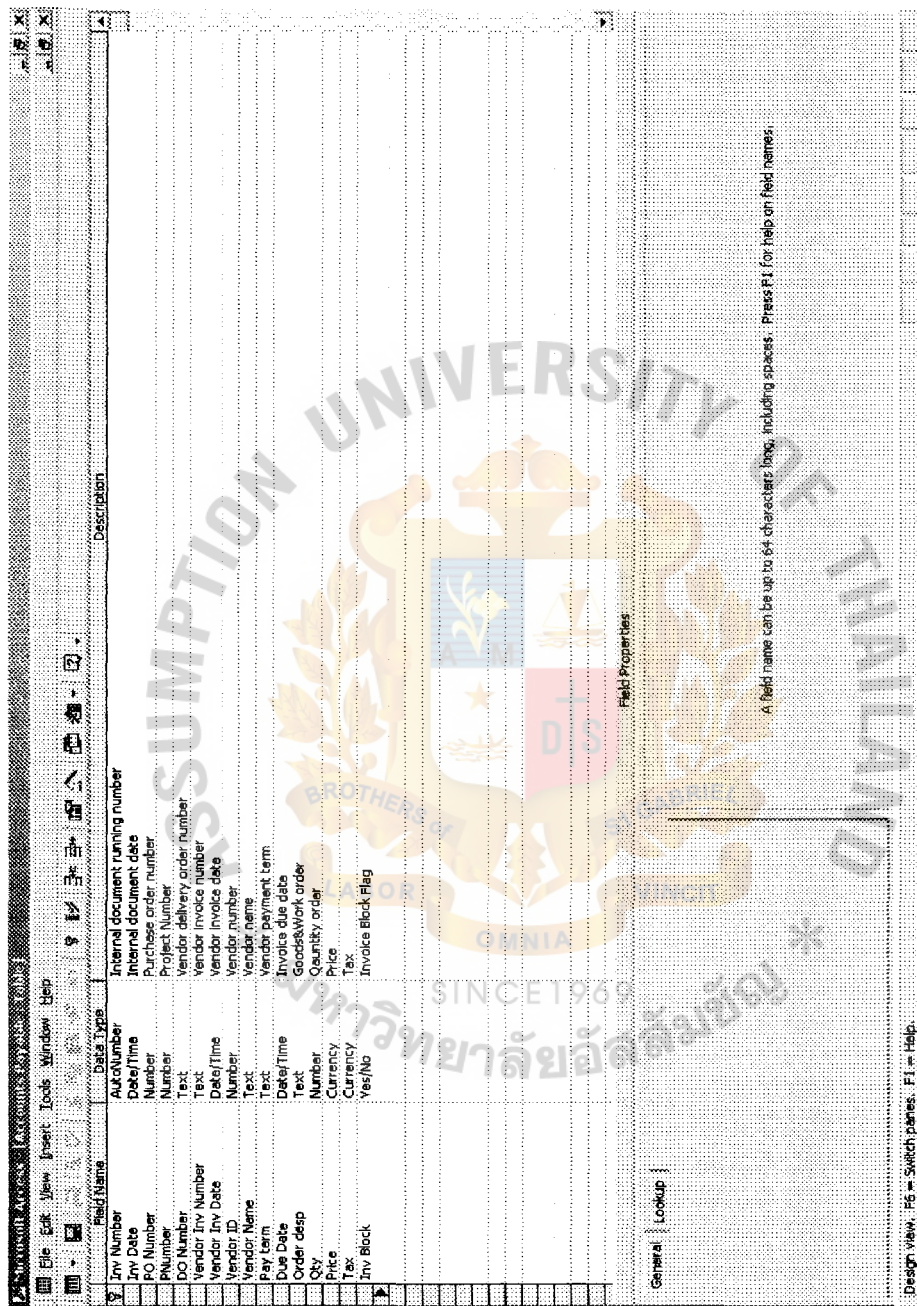


Figure C.2. Microsoft Access – Accounts Payable Table Properties.

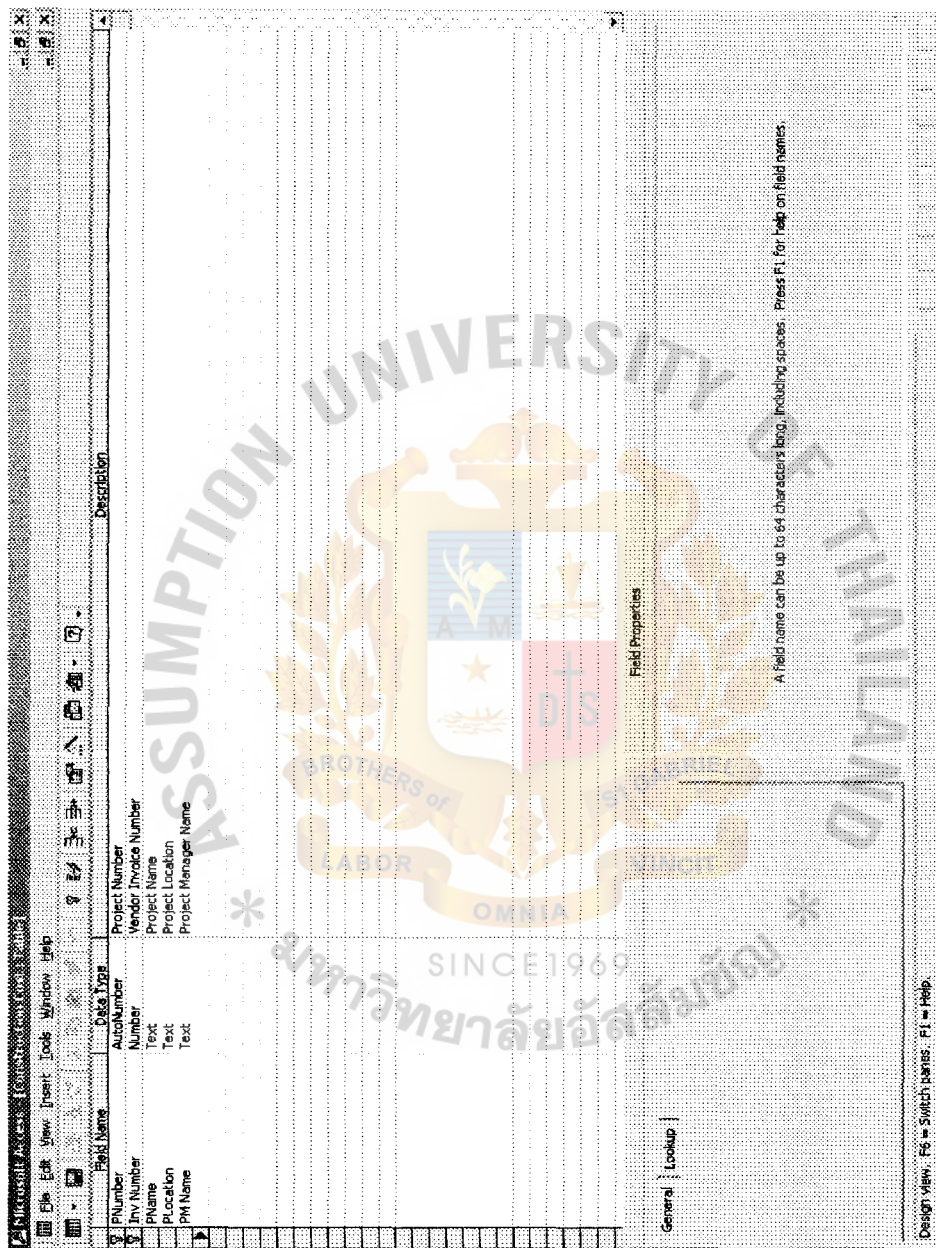


Figure C.4. Microsoft Access – Construction Cost Table Properties.



APPENDIX D

DATA DICTIONARY

Table: Accounts Payable

Properties

Date Created:	18/6/2002 11:33:03	GUID:	Long binary data
Last Updated:	19/6/2002 16:53:49	NameMap:	Long binary data
OrderByOn:	False	Orientation:	0
RecordCount:	0	Updatable:	True

Columns

Name	Type	Size
Inv Number	Long Integer	4
AllowZeroLength:	False	
Attributes:	Fixed Size, Auto-Increment	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
Description:	Internal document running number	
GUID:	Long binary data	
Ordinal Position:	1	
Required:	False	
Source Field:	Inv Number	
Source Table:	Accounts Payable	
Inv Date	Date/Time	8
AllowZeroLength:	False	
Attributes:	Fixed Size	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
Description:	Internal document date	
GUID:	Long binary data	
Ordinal Position:	2	
Required:	False	
Source Field:	Inv Date	
Source Table:	Accounts Payable	
PO Number	Long Integer	4
AllowZeroLength:	False	
Attributes:	Fixed Size	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	

Data Updatable:	False	
DecimalPlaces:	0	
Description:	Purchase order number	
DisplayControl:	Text Box	
GUID:	Long binary data	
Ordinal Position:	3	
Required:	True	
Source Field:	PO Number	
Source Table:	Accounts Payable	
PNumber	Long Integer	4
AllowZeroLength:	False	
Attributes:	Fixed Size	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
DecimalPlaces:	Auto	
Description:	Project Number	
DisplayControl:	Text Box	
GUID:	Long binary data	
Ordinal Position:	4	
Required:	False	
Source Field:	PNumber	
Source Table:	Accounts Payable	
DO Number	Text	50
AllowZeroLength:	False	
Attributes:	Variable Length	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
Description:	Vendor delivery order number	
DisplayControl:	Text Box	
GUID:	Long binary data	
Ordinal Position:	5	
Required:	True	
Source Field:	DO Number	
Source Table:	Accounts Payable	
UnicodeCompression:	True	
Vendor Inv Number	Text	50
AllowZeroLength:	False	
Attributes:	Variable Length	
Collating Order:	Thai	
ColumnHidden:	False	

ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Vendor invoice number
 DisplayControl: Text Box
 GUID: Long binary data
 Ordinal Position: 6
 Required: True
 Source Field: Vendor Inv Number
 Source Table: Accounts Payable
 UnicodeCompression: True

Vendor Inv Date Date/Time 8
 AllowZeroLength: False
 Attributes: Fixed Size
 Collating Order: Thai
 ColumnHidden: False
 ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Vendor invoice date
 Format: Short Date
 GUID: Long binary data
 Ordinal Position: 7
 Required: True
 Source Field: Vendor Inv Date
 Source Table: Accounts Payable

Vendor ID Long Integer 4
 AllowZeroLength: False
 Attributes: Fixed Size
 Collating Order: Thai
 ColumnHidden: False
 ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 DecimalPlaces: 0
 Description: Vendor number
 DisplayControl: Text Box
 GUID: Long binary data
 Ordinal Position: 8
 Required: True
 Source Field: Vendor ID
 Source Table: Accounts Payable

Vendor Name Text 50
 AllowZeroLength: False
 Attributes: Variable Length
 Collating Order: Thai

St. Gabriel's Library, Au

ColumnHidden: False
 ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Vendor name
 DisplayControl: Text Box
 GUID: Long binary data
 Ordinal Position: 9
 Required: True
 Source Field: Vendor Name
 Source Table: Accounts Payable
 UnicodeCompression: True

Pay term Text 50
 AllowZeroLength: False
 Attributes: Variable Length
 BoundColumn: 1
 Collating Order: Thai
 ColumnCount: 1
 ColumnHeads: False
 ColumnHidden: False
 ColumnOrder: Default
 ColumnWidth: Default
 ColumnWidths: 1440
 Data Updatable: False
 Description: Vendor payment term
 DisplayControl: Combo Box
 GUID: Long binary data
 LimitToList: False
 ListRows: 8
 ListWidth: 1440twip
 Ordinal Position: 10
 Required: True
 RowSource: "Cash";"30 Days";"45 Days";"60 Days"
 RowSourceType: Value List
 Source Field: Pay term
 Source Table: Accounts Payable
 UnicodeCompression: True

Due Date Date/Time 8
 AllowZeroLength: False
 Attributes: Fixed Size
 Collating Order: Thai
 ColumnHidden: False
 ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Invoice due date
 Format: Short Date

GUID:	Long binary data	
Ordinal Position:	11	
Required:	True	
Source Field:	Due Date	
Source Table:	Accounts Payable	
Order desp	Text	50
AllowZeroLength:	False	
Attributes:	Variable Length	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
Description:	Goods&Work order	
DisplayControl:	Text Box	
GUID:	Long binary data	
Ordinal Position:	12	
Required:	True	
Source Field:	Order desp	
Source Table:	Accounts Payable	
UnicodeCompression:	True	
Qty	Long Integer	4
AllowZeroLength:	False	
Attributes:	Fixed Size	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
DecimalPlaces:	Auto	
Description:	Quantity order	
DisplayControl:	Text Box	
GUID:	Long binary data	
Ordinal Position:	13	
Required:	True	
Source Field:	Qty	
Source Table:	Accounts Payable	
Price	Currency	8
AllowZeroLength:	False	
Attributes:	Fixed Size	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
DecimalPlaces:	Auto	

	Description:	Price	
	Format:	Standard	
	GUID:	Long binary data	
	Ordinal Position:	14	
	Required:	True	
	Source Field:	Price	
	Source Table:	Accounts Payable	
Tax		Currency	8
	AllowZeroLength:	False	
	Attributes:	Fixed Size	
	Collating Order:	Thai	
	ColumnHidden:	False	
	ColumnOrder:	Default	
	ColumnWidth:	Default	
	Data Updatable:	False	
	DecimalPlaces:	Auto	
	Description:	Tax	
	Format:	Standard	
	GUID:	Long binary data	
	Ordinal Position:	15	
	Required:	True	
	Source Field:	Tax	
	Source Table:	Accounts Payable	
Inv Block		Yes/No	1
	AllowZeroLength:	False	
	Attributes:	Fixed Size	
	Collating Order:	Thai	
	ColumnHidden:	False	
	ColumnOrder:	Default	
	ColumnWidth:	Default	
	Data Updatable:	False	
	Description:	Invoice Block Flag	
	DisplayControl:	106	
	Format:	Yes/No	
	GUID:	Long binary data	
	Ordinal Position:	16	
	Required:	False	
	Source Field:	Inv Block	
	Source Table:	Accounts Payable	

Table: Construction Cost

Properties

Date Created:	19/6/2002 12:14:38	GUID:	Long binary data
Last Updated:	19/6/2002 16:50:24	NameMap:	Long binary data
OrderByOn:	False	Orientation:	0
RecordCount:	0	Updatable:	True

Columns

Name	Type	Size
PNumber	Long Integer	4
AllowZeroLength:	False	
Attributes:	Fixed Size, Auto-Increment	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
Description:	Project Number	
GUID:	Long binary data	
Ordinal Position:	1	
Required:	False	
Source Field:	PNumber	
Source Table:	Construction Cost	
Inv Number	Long Integer	4
AllowZeroLength:	False	
Attributes:	Fixed Size	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
DecimalPlaces:	0	
Description:	Vendor Invoice Number	
DisplayControl:	Text Box	
GUID:	Long binary data	
Ordinal Position:	2	
Required:	True	
Source Field:	Inv Number	
Source Table:	Construction Cost	
PName	Text	50
AllowZeroLength:	False	
Attributes:	Variable Length	
Collating Order:	Thai	
ColumnHidden:	False	

ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Project Name
 DisplayControl: Text Box
 GUID: Long binary data
 Ordinal Position: 3
 Required: True
 Source Field: PName
 Source Table: Construction Cost
 UnicodeCompression: True

PLocation Text 50

AllowZeroLength: False
 Attributes: Variable Length
 Collating Order: Thai
 ColumnHidden: False
 ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Project Location
 DisplayControl: Text Box
 GUID: Long binary data
 Ordinal Position: 4
 Required: True
 Source Field: PLocation
 Source Table: Construction Cost
 UnicodeCompression: True

PM Name Text 50

AllowZeroLength: False
 Attributes: Variable Length
 Collating Order: Thai
 ColumnHidden: False
 ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Project Manager Name
 DisplayControl: Text Box
 GUID: Long binary data
 Ordinal Position: 5
 Required: True
 Source Field: PM Name
 Source Table: Construction Cost
 UnicodeCompression: True

Table: Payment

Properties

Date Created:	19/6/2002 12:07:56	GUID:	Long binary data
Last Updated:	19/6/2002 16:56:35	NameMap:	Long binary data
OrderByOn:	False	Orientation:	0
RecordCount:	0	Updatable:	True

Columns

Name	Type	Size
Pay Number	Long Integer	4
AllowZeroLength:	False	
Attributes:	Fixed Size, Auto-Increment	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
Description:	Internal payment document running number	
GUID:	Long binary data	
Ordinal Position:	1	
Required:	False	
Source Field:	★ Pay Number	
Source Table:	Payment	
Inv Number	Long Integer	4
AllowZeroLength:	False	
Attributes:	Fixed Size	
Collating Order:	Thai	
ColumnHidden:	False	
ColumnOrder:	Default	
ColumnWidth:	Default	
Data Updatable:	False	
DecimalPlaces:	0	
Description:	Internal invoice Number	
DisplayControl:	Text Box	
GUID:	Long binary data	
Ordinal Position:	2	
Required:	True	
Source Field:	Inv Number	
Source Table:	Payment	
Document Date	Date/Time	8
AllowZeroLength:	False	
Attributes:	Fixed Size	
Collating Order:	Thai	
ColumnHidden:	False	

ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Internal payment document date
 Format: Short Date
 GUID: Long binary data
 Ordinal Position: 3
 Required: True
 Source Field: Document Date
 Source Table: Payment

PayB Date Date/Time 8
 AllowZeroLength: False
 Attributes: Fixed Size
 Collating Order: Thai
 ColumnHidden: False
 ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Due payment start date
 Format: Short Date
 GUID: Long binary data
 Ordinal Position: 4
 Required: True
 Source Field: PayB Date
 Source Table: Payment

PayE Date Date/Time 8
 AllowZeroLength: False
 Attributes: Fixed Size
 Collating Order: Thai
 ColumnHidden: False
 ColumnOrder: Default
 ColumnWidth: Default
 Data Updatable: False
 Description: Due payment end date
 Format: Short Date
 GUID: Long binary data
 Ordinal Position: 5
 Required: True
 Source Field: PayE Date
 Source Table: Payment

Pay Block Yes/No 1
 AllowZeroLength: False
 Attributes: Fixed Size
 Collating Order: Thai
 ColumnHidden: False
 ColumnOrder: Default

ColumnWidth:	Default
Data Updatable:	False
Description:	Payment block flag
DisplayControl:	106
Format:	Yes/No
GUID:	Long binary data
Ordinal Position:	6
Required:	True
Source Field:	Pay Block
Source Table:	Payment



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