22 APR 2002

De La Salle University – Dasmariñas

Champan Garments Corporation Import/Export Liquidation System

An Undergraduate Research

Presented to

The Faculty of Computer Studies Department

De La Salle University – Dasmariñas

Dasmariñas, Cavite

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Science in Computer

by

Encabo, Princess B.

Fundano, Beverly Ann A.

Reyes, Walter E.

March 2002

AKLATANG EMILIO AGUINALDO ARCHIVES

TABLE OF CONTENTS

APPROVAL SHEET

ACKNOWLEDGEMENT

DEDICATION

TABLE OF CONTENTS

ABSTRACT

Chapter 1: Introduction

1.1 Background of the Study 1-1

1.2 Statement of the Problem 1-1

1.2.1 Processes 1-2

1.2.2 Computations 1-4

1.2.3 Report Generation 1-4

1.3 Objective of the Study 1-6

1.3.1 General Objective 1-6

1.3.2 Specific Objective 1-6

1.4 Significance of the Study 1-6

1.5 Scope and Limitation 1-7

1.6 Methodology 1-8

1.6.1 System Development Methodology 1-8

1.6.1.1 Prototyping 1-8

1.6.1.1.1 Advantages of Prototyping 1-11

1.6.1.2 The Waterfall Model 1-12

1.6.1.3 V Model 1-14

1.6.1.4 Methodology Used by the Proponents 1-16

1.6.2 Method of Data Collection 1-17

AKLANG-EMILIO AGUINALDO - INFORMATION RESOURCE CENTER
De La Salle University - Dasmariñas, Cavite, Philippines
since 1977

1.6.2.1 Interview Method 1-17

1.6.2.2 Research Method 1-18

1.6.3 Method of Analysis 1-19

1.6.3.1 Data Analysis 1-19

1.6.3.2 Process Analysis 1-26

Chapter 2: Review of Related Literature

2.1 Researched Literature 2-1

2.1.1 Automated Commercial Environment 2-1

2.1.2 PRODTRACK System 2-4

2.1.3 Business Information System 2-9

2.1.4 Materials Requirements Planning (MRP) 2-14

2.2 Conceptual Literature 2-19

Chapter 3: The Existing System

3.1 Current System Overview 3-1

3.2 Administrative Set-up 3-1

3.2.1 Process Certificate of Identification 3-1

3.2.2 Encoding of Certificate of Identification 3-2

3.2.3 Process of Liquidating Raw Materials 3-2

3.2.4 Encoding of Statement. of Reconciliation/Liquidation 3-3

3.2.5 System Coverage 3-3

3.3 System Inputs 3-4

3.3.1 Materials Invoice 3-4

3.3.2 Certificate of Identification 3-4

3.3.3 Certificate of Inspection and Loading 3-4

3.3.4 Boat Note 3-5

3.3.5 Air/Sea Way Bill 3-5

3.3.6 Export Entry Declaration 3-5

3.3.7 Import Entry Declaration 3-5

3.3.8 Purchase Order 3-5

3.3.9 Garments Invoice 3-6

3.3.10 Textile Export Clearance Response 3-6

3.4 System Processes 3-6

3.5 System Output 3-16

3.5.1 Statement of Reconciliation/Liquidation of Materials 3-16

3.5.2 Certificate of Identification 3-17

3.6 Problems and Difficulties Encountered with the Current System 3-17

Chapter 4: The Proposed System

4.1 System Overview 4-1

4.2 Scope of the Proposed System 4-2

4.3 System Objectives 4-3

4.4 System Justification 4-3

4.5 System Transactions 4-5

4.5.1 System Input 4-5

4.5.2 Processes 4-8

4.5.3 Output 4-20

4.6 Database Design 4-20

4.6.1 Preparing the Data Model for the Database 4-20

4.6.2 Data Analysis 4-27

4.6.3 Further Simplification Through Inspection 4-30

4.6.4 The New ERD 4-31

4.7 The Database Design of the Proposed System 4-32

4.8 Database Design Synopsis 4-32

4.9 Architectural Design 4-41

Chapter 5.0: Summary, Recommendation and Conclusion 5-1

APPENDICES

BIBLIOGRAPHY

CURRICULUM VITAE

AKLATANG EMILIO AGUINALDO - INFORMATION RESOURCE CENTER
De La Salle University-Dasmariñas • Since 1977 • Dasmariñas, Cavite, Philippines

LIST OF FIGURES

Figure 2.1	Clients Form	2-10
Figure 2.2	Air Freight Form	2-11
Figure 2.3	Supplier Form	2-11
Figure 2.4	Product Search Form	2-12
Figure 2.5	Add New Product Form	2-12
Figure 2.6	Packing List Form	2-13
Figure 2.7	Add Supplier	2-13
Figure 3.1	ERD of the Existing System at the Initial Stage of Study	3-19
Figure 3.2.1	Attributes of the ERD of the Existing System at the Initial Stage of Study	3-20
Figure 3.2.2	Attributes of the ERD of the Existing System at the Initial Stage of Study	3-21
Figure 3.2.3	Attributes of the ERD of the Existing System at the Initial Stage of Study	3-22
Figure 3.2.4	Attributes of the ERD of the Existing System at the Initial Stage of Study	3-23
Figure 4.3.1	Entity Relationship Diagram of the Proposed System	4-34
Figure 4.3.2	Attributes of the ERD for the Proposed System	4-35
Figure 4.3.3	Attributes of the ERD for the Proposed System	4-36
Figure 4.3.4	Table Structures / Data Dictionary	4-37
Figure 4.3.5	Normalization of Tables	4-53

LIST OF APPENDICES

Appendix A	Ishikawa Diagram	A-1
Appendix B	Data Flow Diagram of the Existing System	B-1
Appendix C	Data Flow Diagram of the Proposed System	C-1
Appendix D	Project Schedule	D-1
Appendix E	Dialogue Tree	E-1
Appendix F	Sample Forms	
	Purchase Order Form	F-1
	Materials' Invoice	F-2
	Import Declaration	F-3
	Sea/Airway Bill (Import)	F-4
	Garment's Sales Invoice	F-5
	Certificate of Identification	F-6
	Certificate of Inspection and Loading	F-7
	Boat Note	F-8
	Textile Export Clearance Response	F-9
	Export Declaration	F-10
	Sea/Airway Bill (Export)	F-11
	Statement of Reconciliation/Liquidation of Raw Materials	F-12
Appendix G	Sample Print Reports	
	Certificate of Identification	G-1
	Statement of Reconciliation/Liquidation of Raw Materials	G-2
Appendix H	Certifications	
	H.1 Panelists' Certification	H-1
	H.2 Special Problem Clearance	H-2
	H.3 Editor's Certification	H-3

AKLATANG EMILIO AGUINALDO - INFORMATION RESOURCE CENTER
De La Salle University - Dasmariñas, Cavite, Philippines
Since 1977

H.4	CRC Representative's Certification	H-4
H.5	Adviser's Certification	H-5

AKLATANG EMILIO AGUINALDO - INFORMATION RESOURCE CENTER
De La Salle University-Dasmariñas • Since 1977 • Dasmariñas, Cavite, Philippines

Abstract

Champan Garments Corporation Import/Export Liquidation System is developed to address the current problems encountered by the existing manual system of the company. Such problems includes:

1. Insufficient tracking of import and export entries; this is because the raw materials of the single purchase order are shipped in different dates and in different volumes. The department spends a lot of time in tracking the arrival of each material. And most of the liquidation process includes deducting the quantity of materials used in a particular garment exported from the quantity of materials declared in the materials invoice attached to the import entry. This is very important for them to know if all the materials stated in the materials invoice attached in the import entry are completely exported before the import entry expire.
2. Computation of the total garments exported, total quantity of materials used in the export as a whole, manufacturing usage for piece and balance wastage; this is because the department has to determine as to what garment used a particular material and determine how much was consumed in this garment, and when are these garments exported so as to justify that the import are all exported before it expire. Those were the computations that make the liquidation process tiresome and complicated.
3. Late submission of the Statement of Reconciliation/Liquidation of Raw Materials and Certificate of Identification at the Bureau of Customs; this occurs because the report could not be made unless the liquidation of import/export materials is finished. A long period of time is spent to liquidate raw materials, thus the report needed is delayed until the liquidation and coding the result is finished. The Champan Import Export Liquidation System is design to address the sated problems.

The system is designed to perform the computations stated above, it will automatically liquidate materials everytime a garment is exported. It does not have to wait for all the materials to be exported unlike the manual system, which liquidate the import only after all the import is exported. The system also addresses the tedious coding of report that takes up an ample amount of time before it can be printed. The department can avoid late submission of report due to coding problem. But the system is not responsible for late submission of the Statement of Liquidation and Reconciliation of Materials due to late consumption of materials before the import entry expires since the system has no control of the production of the garments itself.

The prototyping method is used in developing the system because it has the potential for changing the system early in its development, the opportunity to stop development on a system that is not working and the possibility of developing a system that more closely addresses user's needs and expectations. Another thing is that you can easily go back to any stage whenever the change requires so unlike with the other methods wherein you can't go back easily to any stage where the system had errors.

Microsoft Visual Basic 6.0 is the programming language used in creating the software because it is the latest version of Microsoft Visual Basic, when the proponent started coding the system. Visual Basic is easier to use in creating a user-friendly graphical user interface and is suitable for prototyping systems. There are other programming languages that offer such features but the proponents choose this programming language because they are already familiar with the language unlike if they use a language in which they will study from scratch.