Interisland Liner Shipping Rate Rationalization Study

Volume IV

MARINA and SHIPPERCON Database Design

Draft Final Report

August 1991

Submitted to

United States Agency for International Development
Manila, Philippines

Submitted by

Nathan Associates Inc.
Economic and Management Consultants
Arlington, Virginia

FOREWORD

The Interisland Liner Shipping Rate Rationalization Study (SRRS) was conducted in the Philippines from November 1990 through August 1991 by a six-person team. Throughout the study the team received complete cooperation from management and staff of the Maritime Industry Authority (MARINA) and the Phillipine Shipper's Council. The United States Agency for International Devevlopment (USAID) and the Conference of Interisland Shipowners and Operators (CISO), together with MARINA and SHIPPERCON, closely reviewed the work of the team and provided many useful comments. Several other Philippine public and private organizations also provided useful information and comments. Despite all of the valuable inputs from various concerned organizations and individuals, this report and its conclusions and recommendations remain solely the products of the SRRS team and do not necessarily reflect the views of any other individuals or organizations. Any mistakes which may be contained in the report are solely the responsibility of the study team.

An SRRS first phase report was submitted in June 1991. That report has been incorporated into this draft final report, with some revisions based on comments and further analysis.

This final draft report is being submitted in five volumes. Volume I presents the findings and recommendations of the SRRS on liner shipping rate rationalization and deregulation; Volume II presents the study team shipping cost and rate analysis and incorporates most of the first phase report; Volume III discusses the economic effects of shipping rate regulation and deregulation; Volume IV discusses the design and development of MARINA and SHIPPERCON databases; and Volume V presents a broader view of the Philippine interisland shipping sector and identifies desirable actions to be taken for improvement of the sector.

CONTENTS

CONTENTS
(contents)

EXECUTIVE SUMMARY

The Interisland Liner Shipping Rate and Rationalization Study requires that databases be developed for both the Maritime Industry Authority (MARINA) and the Philippine Shippers' Council (SHIPPERCON). A review of their existing systems was performed, and information on their operations and responsibilities was gathered as initial steps toward developing an automated system. This technical report details their system requirements and the analysis made on their systems. It also makes recommendations for computer software and hardware requirements, and for overall system management and staff training.

In order to meet MARINA's requirements, a local area network (LAN) is envisioned. Three high capacity main computers need to be installed for four major sectors, namely, domestic, international, manpower and ship building/ship repair. Small capacity computers (computers with floppy drives) will branch out of these main computers for use of staff and other divisions. Major computer programs that will be installed are dBase III+, dBase IV, and Clipper for the database development; and the Reference Point software to organize administrative files and programs. An optional program is the electronic mail to enhance interoffice communications.

To meet the MARINA's system requirements for rate adjustment, one high capacity computer and at least five workstations need to be set up. The high capacity computer will act as a server in a LAN and will contain data or files for rate adjustment mechanism and some existing domestic files.

A LAN is also recommended at SHIPPERCON with at least one main computer acting as the network server and a total of six workstations. Two of these workstations will be dedicated for communication with regional offices. The LAN will have an extensive database processing either using dBase III+ and Clipper; or a fourth generation language like DataEase. There is an option to install also a Reference Point to organize their administrative files.

Considering the modular design of the database for SHIPPERCON, they have the option to prioritize their responsibilities and implement the database one at a time. SHIPPERCON has decided that their immediate requirements are in the following areas: cargo consolidators, breakbulk agents, non-vessel operating common carriers, freight forwarders, and handling of complaints. These

immediate requirements are SHIPPERCON's additional areas of responsibility effective August 1991. Implementation of this calls for a new microcomputer, a relational database management utility like DataEase and a four- to five-month implementation period.

INTRODUCTION

Part of the Interisland Liner Shipping Rate Rationalization Study calls for the development of databases for Maritime Industry Authority (MARINA) and Philippine Shippers' Council (SHIPPERCON). Systems analysis made on these two agencies revealed the strong need for automation. With the volume of information they receive and the constant change in the shipping industry, the absence of an automated system seems inconceivable. MARINA and SHIPPERCON need computerization in order to respond efficiently and effectively to their clients.

The main goal of MARINA's database development is to automate the procedures for adjusting rates. Discussion in interfacing this database with MARINA's existing computer system is included in this report. MARINA's other system requirements were also investigated to come up with a broad (or general) idea of an integrated computer system.

SHIPPERCON has an urgent need to establish a database to cope with its continued growth and to meet the demand for its services. SHIPPERCON currently has responsibilities involving shipping freight rates, waivers from Presidential Decree (PD) 1466, cargo handling rates, and port charges. In addition, SHIPPERCON is embracing new areas of responsibility to include cargo consolidators, breakbulk agents, freight forwarders, non-vessel operating common carrier (NVOCC), complaints, and monitoring of domestic cargo rates. Steps are also being made by SHIPPERCON toward regionalization. These factors make the need for computerization even stronger.

This report makes specifications to enhance current computer capabilities and for new computer resources for both MARINA and SHIPPERCON. The scope of this report is limited to preliminary investigations, systems analysis, and system design of a management information system. System development, i.e. programming and implementation, are not included as per terms of reference.

Chapter 1

MARINA DATABASE DEVELOPMENT

Existing Computer System

The Management Services Staff (MSS) handles all facets of MARINA's computer system from design to maintenance to data entry and report printouts. Currently, MARINA has four major independent computer systems, namely: (1) Vessel Franchise Inventory, (2) Inventory of Domestic Fleet, (3) Inventory of Overseas Fleet and (4) Maritime Directory. In addition, MSS also has several smaller systems for various divisions. Review of MARINA's computer system reveals that it has very little potential for development due to hardware constraints. Another limiting factor is accessibility of computers to other MARINA staff. This limited accessibility hinders efficiency in several aspects of an operating database, such as modification, update, deletion, report printouts, etc.

The software packages currently in use for MARINA's databases are dBase III+ and Foxbase. The programming language COBOL is also being used for generating reports. COBOL is interfaced with files on dBase through conversion of these files into ASCII format. MARINA also has in its possession the Clipper software which can be used to enhance the capabilities of the dBase III+ software.

Proposed Rate Adjustment System

The rate adjustment system will basically require financial data from shipping companies, traffic data, and vessel particulars. This data will be derived from the new Annual Report recommended by SRRS, the existing Vessel Franchising system and the Vessel Inventory system. A brief discussion of the process flow is provided below. Detail discussion and output reports of rate adjustment mechanism can be found in Sections 5 and 6 of the first phase report.

a) Process the data from the new Annual Report format by creating separate files by section and thereby enabling the use of various computer terminals for simulataneous encoding work.

b) Integrate all the separate files created by various computer workstations into a main database.

c) Generate statistical profiles of deadweight, passenger capacity, and age of the interisland fleet contained in the main database.

d) Define rate policy variables such as the allowable rate of return, and to specify either the design load factors or actual load factors to be used in cost per mile calculations.

e) Audit the operations and financial data to indicate which reports may be doubtful and to assign reasonable assumptions where some data is missing.

f) Generate hard print or disk file of cost analysis by vessel.

g) Eliminate peculiar vessel records from the database, either manually or automatically, on the basis of statistical tests prior to estimating new fork tariffs.

h) Allocate daily operating and daily runnning costs to the respective types of service provided by each vessel, i.e., cargo and/or passenger service.

i) Estimate a fixed and distance-related component for a composite rate covering all commodity groups, similar to freight-all-kinds.

j) Determine the relative magnitude of the weighted mean rate in relation to a reference rate, i.e., Class A, given the cargo and passenger traffic mix.

k) Compute the tariff for each commodity group on the basis that the prevailing extent of cross-subsidization between and among commodity groups and passenger classes is maintained.

Software Recommendation

A customized database program is needed to implement the rate adjustment system. The software used by SRRS team to generate outputs has been dBase IV. Limitations of dBase III have been reached, specifically the maximum number of fields per file. Although the files in MARINA are in dBase III format, this will not be a problem because dBase III files are compatible with dBase IV. Clipper

software may also be used instead of dBase IV as it is more advantageous to use since Clipper creates an executable code and reduces the memory required to run a program.

Hardware Recommendation

A LAN is recommended with at least five workstations. An 80386 100 megabytes microcomputer will act as a server. The workstations will also be 80386, but with floppy drives.

Appendix M-C shows the detail listings of hardware and software requirements.

Effective Rate Administration

In support of the other activities related to MARINA's rate regulatory functions, the MARINA administration requires internal management reports to monitor:

a) The status of all pending applications for rate adjustment, with emphasis as to the number of working days lapsed since receipt of application, and as to completeness of submitted documents;

b) That apart from the publication of notice of public hearing in popular daily newspapers, all affected parties are notified well in advance of the schedule hearing;

c) The status of complaints from shippers and/or passengers regarding cases of overcharging, with emphasis as to the person/s assigned to investigate the complaint and the number of working days lapsed since receipt of complaint;

d) The status of complaints from franchised liner operators regarding cases of rate undercutting, with emphasis as to the person/s assigned to investigate the complaint and the number of working days lapsed since receipt of complaint; and,

e) The increase in cost of ship operations compared to rate increases over periodic intervals.

Appendix M-D shows other information requirements of MARINA.

Overall Hardware and Software Recommendations

MARINA requires three high capacity main computers linked to each other to comprise a local area network. These computers will be dedicated mostly to the work of four major sectors--international, domestic, manpower and ship building/ship repair. Small capacity computers are also needed to serve the other divisions with their computer requirements. These small capacity computers which will act as workstations that will also be linked to the local area network.

The software requirements for MARINA's database development include the installation of dBase III+, dBase IV and Clipper. The software packages Reference Point and CC Mail are also recommended to organize MARINA's administrative files and programs and to enhance interoffice communications respectively.

Appendix M-A shows proposed distribution of equipment.

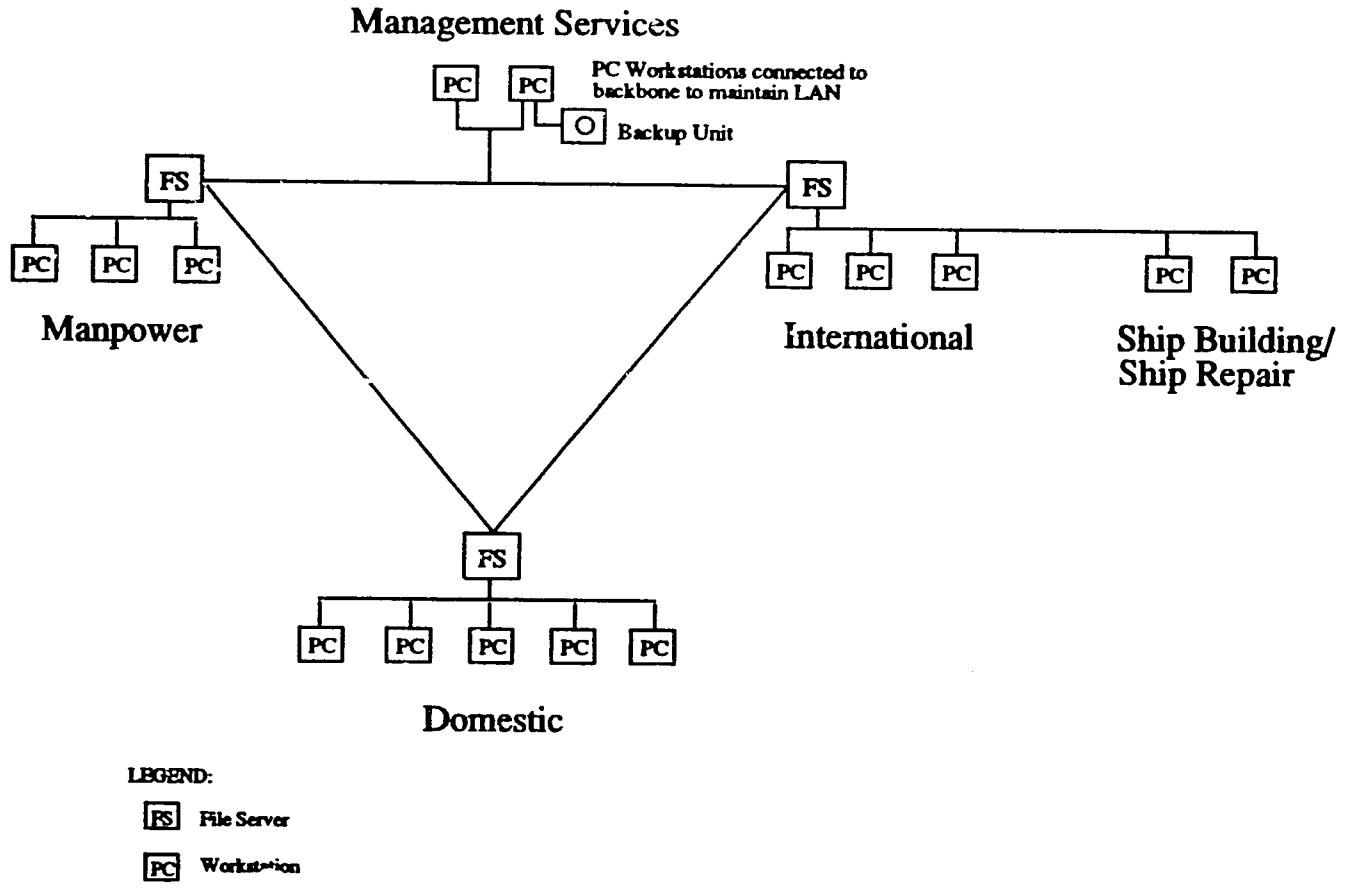
Implementation Plan

Since SRRS team has already written some programs in dBASE IV to produce the rate adjustment for 1991 fork tariff, what a programmer analyst will do is to test each module, put together all the programs to make a user friendly system. Then the programmer analyst must create a test plan to test the system as a whole with minimum records. User training and as well as training the computer division staff will be conducted. Finally, the programmer analyst must turn in at least two documentations, program development and a user manual.

Appendix M-A

PROPOSED DISTRIBUTION OF EQUIPMENT

Proposed Distribution of Equipment for MARINA



Appendix M-B

ANNUAL REPORT SCREENS/FILE STRUCTURE

FORM VFI Master

VESSEL FRANCHISE INVENTORY SYSTEM

ValCode __ DocCode _____

VesName _____ VesExName _____
VesCode _____

OpeName _____ OpeExName _____
Address _____

TypeOper _
Office _
CaseNo _____
Issuance _____
DateVal _____
DateExp _____

Type ___
RigType ____
SerType _

1 10 20 30 40 50 60 70 80

FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	Offset
1	ValCode	Text	2	No	No	No	No	No	No	2	5
2	DocCode	Text	6	No	No	No	No	No	No	6	7
3	VesName	Text	25	No	No	No	No	No	No	25	13
4	VesExName	Text	25	No	No	No	No	No	No	25	38
5	VesCode	Text	5	No	No	No	No	No	No	5	63
6	OpeName	Text	25	No	No	No	No	No	No	25	68
7	OpeExName	Text	25	No	No	No	No	No	No	25	93
8	Address	Text	59	No	No	No	No	No	No	59	118
9	TypeOper	Number	1	No	No	No	No	Yes	No	1	177
	Number Type : Integer										
	Lower Range : 1										
	Upper Range : 4										
10	Office	Number	1	No	No	No	No	Yes	No	1	178
	Number Type : Integer										
	Lower Range : 1										
	Upper Range : 8										
11	CaseNo	Text	7	No	No	No	No	No	No	7	179
12	Issuance	Date	8	No	No	No	No	No	No	6	186
13	DateVal	Date	8	No	No	No	No	No	No	6	192
14	DateExp	Date	8	No	No	No	No	No	No	6	198
15	Type	Text	3	No	No	No	No	No	No	3	204
16	RigType	Text	4	No	No	No	No	No	No	4	207
17	SerType	Number	1	No	No	No	No	Yes	No	1	211
	Number Type : Integer										
	Lower Range : 1										
	Upper Range : 2										

FORM Cargo & Pax Traffic

Vessel Code _____ Vessel Name _____

Voyage No. _____ Voyage Start_____ Voyage End _____

Route ____
Ports Called ____
Port Leg:
  Origin ____
  Destination ____
Number of Containers:
  Empty ____
  Loaded ____
Total TEU
Cargo Carried:
  Cubic Meter _____
  Metric Ton _____
Passenger Carried:
  1st Class _____
  2nd Class _____
  3rd Class _____
Freight Revenue _____
Passenger Rev _____

FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	VesCode	Text	5	No	Yes	No	No	No	No	5	5
2	Vessel Name	Text	35	No	No	No	No	No	Virt	35	67
3	Voyage No.	Text	5	No	No	No	No	No	No	5	10
4	VoyStart	Date	8	No	No	No	No	No	No	6	15
5	VoyEnd	Date	8	No	No	No	No	No	No	6	21
6	Route	Text	4	No	No	No	No	No	No	4	27
7	PortCall	Number	5	No	No	No	No	No	No	2	31
	Number Type : Integer										
8	PortOrig	Text	4	No	No	No	No	No	No	4	33
9	PortDest	Text	4	No	No	No	No	No	No	4	37
10	ContEmpty	Number	3	No	No	No	No	No	No	2	41
	Number Type : Integer										
11	ContLoaded	Number	3	No	No	No	No	No	No	2	43
	Number Type : Integer										
12	CubicCa	Number	7	No	No	No	No	No	No	4	45
	Number Type : Fixed point										
	Digits to left of decimal = 5										
13	MTCarri	Number	7	No	No	No	No	No	No	4	49
	Number Type : Integer										
14	PaxCla1	Number	5	No	No	No	No	No	No	2	53
	Number Type : Integer										
15	PaxCla2	Number	5	No	No	No	No	No	No	2	55
	Number Type : Integer										
16	PaxCla3	Number	5	No	No	No	No	No	No	2	57
	Number Type : Integer										
17	Freight	Number	9	No	No	No	No	No	No	4	59
	Number Type : Integer										
18	PassRev	Number	9	No	No	No	No	No	No	4	63

FORM Vessel Operations

Company Code _____ Company Name _____
Vessel Code _____ Vessel Name _____

1. Selected Vessel Particulars
   - 1.1 Service type _
   - 1.2 Year Built ____
   - 1.3 Gross Rev Ton (GRT) _____
   - 1.4 Deadweight in Tons (DWT) _____
   - 1.5 Passenger Capacity _____
   - 1.6 Speed (knots) ___
   - 1.7 Main Engine BHP ___
2. Vessel Performance
   - 2.1 Days in Commission
     - 2.1.1 At Sea ___
     - 2.1.2 In Port ___
   - 2.2 Days Out Of Commission
     - 2.2.1 Drydocked ___
     - 2.2.2 Afloat Repairs ___
     - 2.2.3 Laid-up ___
   - 2.3 Mileage for the period
     - 2.3.1 Nautical Miles run _____
     - 2.3.2 No. of Voyages ____
   - 2.4 Cargo/Passenger Load
     - 2.4.1 Total M. Tons _____
     - 2.4.2 Total Cu. Meter _____
     - 2.4.3 Total TEUs _____
     - 2.4.4 1st Cls Pax Served _____
     - 2.4.5 2nd Cls Pax Served _____
     - 2.4.6 3rd Cls Pax Served _____
3. Vessel Manpower
   - 3.1 Officers
     - 3.1.1 Licensed - Deck ___
     - 3.1.2 Licensed - Engine ___
   - 3.2 Crew
     - 3.2.1 Regular - Deck ___
     - 3.2.2 Regular - Engine ___
     - 3.2.3 Apprentice - Deck ___
     - 3.2.4 Apprentice - Engine ___

FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	OpeCode	Text	5	No	No	No	No	No	No	5	6
2	Company Name	Text	36	No	No	No	No	No	Virt	36	102
3	VesCode	Text	5	No	Yes	No	No	No	No	5	11
4	VesName	Text	35	No	No	No	No	No	Virt	35	138
5	Type	Number	1	No	No	No	No	No	No	1	16
	Number Type : Integer										
6	YrBuilt	Number	5	No	No	No	No	No	No	2	17
	Number Type : Integer										
7	VeslGrt	Number	10	No	No	No	No	No	No	8	19
	Number Type : Fixed point										
	Digits to left of decimal = 7										
8	VeslDwt	Number	10	No	No	No	No	No	No	8	27

	Number Type : Fixed point Digits to left of decimal = 7										
9	PassCap	Number	6	No	No	No	No	No	No	4	35
	Number Type : Integer										
10	VeSpeed	Number	2	No	No	No	No	No	No	1	39
	Number Type : Integer										
11	EngiBHP	Number	3	No	No	No	No	No	No	2	40
	Number Type : Integer										
12	ComDaySea	Number	3	No	No	No	No	No	No	2	42
	Number Type : Integer										
13	ComDayPrt	Number	3	No	No	No	No	No	No	2	44
	Number Type : Integer										
14	DryDock	Number	3	No	No	No	No	No	No	2	46
	Number Type : Integer										
15	Repairs	Number	3	No	No	No	No	No	No	2	48
	Number Type : Integer										
16	Laid_up	Number	3	No	No	No	No	No	No	2	50
	Number Type : Integer										
17	MileRun	Number	7	No	No	No	No	No	No	4	52
	Number Type : Integer										
18	Voyages	Number	5	No	No	No	No	No	No	2	56
	Number Type : Integer										
19	TotlTons	Number	12	No	No	No	No	No	No	8	58
	Number Type : Fixed point Digits to left of decimal = 10										
20	CubicCa	Number	12	No	No	No	No	No	No	8	66
	Number Type : Fixed point Digits to left of decimal = 10										
21	TEUCarr	Number	6	No	No	No	No	No	No	4	74
	Number Type : Integer										
22	PaxCla1	Number	6	No	No	No	No	No	No	4	78
	Number Type : Integer										
23	PaxCla2	Number	6	No	No	No	No	No	No	4	82
	Number Type : Integer										
24	PaxCla3	Number	6	No	No	No	No	No	No	4	86
	Number Type : Integer										
25	DeckOff	Number	3	No	No	No	No	No	No	2	90
	Number Type : Integer										
26	EngiOff	Number	3	No	No	No	No	No	No	2	92
	Number Type : Integer										
27	DeckCrw	Number	3	No	No	No	No	No	No	2	94
	Number Type : Integer										
28	EngiCrw	Number	3	No	No	No	No	No	No	2	96
	Number Type : Integer										
29	DeckApp	Number	3	No	No	No	No	No	No	2	98
	Number Type : Integer										
30	EngiApp	Number	3	No	No	No	No	No	No	2	100
	Number Type : Integer										

FORM Company Income File

COMPANY INCOME FILE

Op Company Code ____

Freight Revenue _____
Passeng Revenue _____
Rev from Vsl Charter _____
Other Vsl Revenue _____

Bunker Fuel _____
Diesel Fuel _____
Special Fuel Oil _____
Lubricants _____
Vsl Deprec on Cost _____
Vsl Deprec on Appraisal Incr _____
Drydocking, Repairs & Maint _____
Stevedoring & Wharf Labor _____
Salaries & Wages _____
Food & Subsistence _____
Commission Expense _____
Protection & Indemnity Premium _____

FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	OpeCode	Text	5	No	No	No	No	No	No	5	5
2	Freight	Number	13	No	No	No	No	No	No	8	10
	Number Type : Fixed point Digits to left of decimal = 11										
3	PassRev	Number	13	No	No	No	No	No	No	8	18
	Number Type : Fixed point Digits to left of decimal = 11										
4	ChrtRev	Number	13	No	No	No	No	No	No	8	26
	Number Type : Fixed point Digits to left of decimal = 11										
5	OthrRev	Number	11	No	No	No	No	No	No	8	34
	Number Type : Fixed point Digits to left of decimal = 9										
6	Fuel_BF	Number	12	No	No	No	No	No	No	8	42
	Number Type : Fixed point Digits to left of decimal = 10										
7	Fuel_DO	Number	12	No	No	No	No	No	No	8	50
	Number Type : Fixed point Digits to left of decimal = 10										
8	Fuel_SF	Number	12	No	No	No	No	No	No	8	58
	Number Type : Fixed point Digits to left of decimal = 10										
9	Lubrics	Number	11	No	No	No	No	No	No	8	66
	Number Type : Fixed point Digits to left of decimal = 9										
10	VslDepc	Number	11	No	No	No	No	No	No	8	74
	Number Type : Fixed point Digits to left of decimal = 9										
11	VslDepA	Number	11	No	No	No	No	No	No	8	82

	Number Type : Fixed point Digits to left of decimal = 9										
12	DryDRnM	Number	11	No	No	No	No	No	No	8	90
	Number Type : Fixed point Digits to left of decimal = 9										
13	SteveDo	Number	11	No	No	No	No	No	No	8	98
	Number Type : Fixed point Digits to left of decimal = 9										
14	SalWage	Number	11	No	No	No	No	No	No	8	106
	Number Type : Fixed point Digits to left of decimal = 9										
15	FoodSub	Number	11	No	No	No	No	No	No	8	114
	Number Type : Fixed point Digits to left of decimal = 9										
16	COmmExp	Number	11	No	No	No	No	No	No	8	122
	Number Type : Fixed point Digits to left of decimal = 9										
17	PandIPr	Number	11	No	No	No	No	No	No	8	130
	Number Type : Fixed point Digits to left of decimal = 9										

FORM Company Fleet

COMPANY DATA

Year

1. Company Code: _____ Company Name _____
   Company Category _ Asset Scale _

5. Company Fleet

	Number	Total GRT	Total DWT
Vessels Owned			
Vessels Chartered - PD 760			
Vessels Chartered - Local			
Vessels on Lease/Purchase			
Total Fleet Operated			

6. Manpower:

	Ave Emp Month	Annual Cost
Administrative & Support Personnel		
- Managerial and Supervisory		
- Other Personnel		
Reserve Officers		
Reserve Crew		
Total Manpower & Cost		

1 10 20 30 40 50 60 70 80

FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	OpeCode	Text	5	Yes	Yes	Yes	No	No	No	5	6
2	OpeName	Text	36	No	No	No	No	No	Virt	36	125
3	OpeCate	Choice	1	No	No	No	No	No	No	1	11
	Choice 1: L										
	Choice 2: M										
	Choice 3: S										
4	AssetSc	Choice	1	No	No	No	No	No	No	1	12
	Choice 1: 1										
	Choice 2: 2										
	Choice 3: 3										
	Choice 4: 4										
5	VslOwnd	Number	3	No	No	No	No	No	No	2	13
	Number Type : Integer										
6	GrtOwnd	Number	10	No	No	No	No	No	No	8	15
	Number Type : Fixed point										
	Digits to left of decimal = 7										
7	DWTOwnd	Number	10	No	No	No	No	No	No	8	23
	Number Type : Fixed point										
	Digits to left of decimal = 7										
8	Vsl760C	Number	3	No	No	No	No	No	No	2	31
	Number Type : Integer										
9	Grt760C	Number	10	No	No	No	No	No	No	8	33
	Number Type : Fixed point										
	Digits to left of decimal = 7										
10	DWT760C	Number	10	No	No	No	No	No	No	8	41

```
      Number Type : Fixed point
      Digits to left of decimal = 7
 11 VslLocC                Number        3 No    No  No    No    No    No      2     49
      Number Type : Integer
 12 GRTLocC                Number       10 No    No  No    No    No    No      8     51
      Number Type : Fixed point
      Digits to left of decimal = 7
 13 DWTLocC                Number       10 No    No  No    No    No    No      8     59
      Number Type : Fixed point
      Digits to left of decimal = 7
 14 VslLeas                Number        3 No    No  No    No    No    No      2     67
      Number Type : Integer
 15 GrtLeas                Number       10 No    No  No    No    No    No      8     69
      Number Type : Fixed point
      Digits to left of decimal = 7
 16 DWTLeas                Number       10 No    No  No    No    No    No      8     77
      Number Type : Fixed point
      Digits to left of decimal = 7
 17 VslTotal               Number        5 No    No  No    Yes   No    Virt    2     161
      Number Type : Integer
      Field calculation formula : VslOwnd+VslLocC+Vsl760C+VslLeas
 18 TotGRT                 Number       10 No    No  No    Yes   No    Virt    8     163
      Number Type : Fixed point
      Digits to left of decimal = 7
      Field calculation formula : GrtOwnd+GRT760C+GRTLocC+GRTLeas
 19 TotDWT                 Number       10 No    No  No    Yes   No    Virt    8     171
      Number Type : Fixed point
      Digits to left of decimal = 7
      Field calculation formula : DWTOwnd+DWT760C+DWTLocC+DWTLeas
 20 AdmPeMgr               Number        5 No    No  No    No    No    No      2     85
      Number Type : Integer
 21 AdmPeMgrYY             Number       10 No    No  No    No    No    No      8     87
      Number Type : Fixed point
      Digits to left of decimal = 7
 22 AdmPeOth               Number        5 No    No  No    No    No    No      2     95
      Number Type : Integer
 23 AdmPeOthYY             Number       10 No    No  No    No    No    No      8     97
      Number Type : Fixed point
      Digits to left of decimal = 7
 24 ResOffi                Number        5 No    No  No    No    No    No      2     105
      Number Type : Integer
 25 ResOffiYY              Number       10 No    No  No    No    No    No      8     107
      Number Type : Fixed point
      Digits to left of decimal = 7
 26 ResCrew                Number        5 No    No  No    No    No    No      2     115
      Number Type : Integer
 27 ResCrewYY              Number       10 No    No  No    No    No    No      8     117
      Number Type : Fixed point
      Digits to left of decimal = 7
 28 TotManpower            Number        6 No    No  No    Yes   No    Virt    4     179
      Number Type : Integer
      Field calculation formula : AdmPeMgr+AdmPeOth+ResOffi+ResCrew
 29 TotManpowerYY          Number       10 No    No  No    Yes   No    Virt    8     183
      Number Type : Fixed point
      Digits to left of decimal = 7
      Field calculation formula : AdmPeMgrYY+AdmPeOthYY+ResOffiYY+ResCrewYY
```

FORM Vessel Income

Vessel Code _____ Vessel Name _____

OPERATING REVENUE:
- Freight Revenue
- Passenger Revenue
- Revenue from Vessel Charter
- Other Vessel Revenue
- Total Operating Revenue

VESSEL OPERATING EXPENSE:

Voyage Expense
- Bunker Fuel
- Diesel Fuel
- Special Fuel Oil
- Stevedoring & Wharf Labor
- Pilotage
- Port Charges
- Common Carrier's Tax
- Commission
- Misc Voyage Expense
- Total Voyage Expense

Running Expense
- Lubricants
- Drydocking, Repair & Maint
- Salaries & Wages
- Employee Benefits
- Food & Subsistence
- Insur - Protect & Indemnity
- Insur - Hull
- Deck & Engine Supplies
- Steward Supplies
- Water
- Claims & Damages
- Taxes & Licenses
- Charter Hire Expense
- Misc Running Expense
- Total Running Expense

Capital Expense
- Depreciation on Cost
- Depreciation on Appr Increment
- Total Capital Expense

TOTAL VESSEL OPERATING EXPENSE

GROSS OPERATING PROFIT/(LOSS)

1 10 20 30 40 50 60 70 80

FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	VesCode	Text	5	No	Yes	Yes	No	No	No	5	7
2	VesName	Text	35	No	No	No	No	No	Virt	35	172
3	Freight	Number	8	No	No	No	No	No	No	8	12

```
     Number Type : Fixed point
     Digits to left of decimal = 6
  4 PassRev                Number          8 No    No  No  No  No  No      8    20
     Number Type : Fixed point
     Digits to left of decimal = 6
  5 ChrtRev                Number          8 No    No  No  No  No  No      8    28
     Number Type : Fixed point
     Digits to left of decimal = 6
  6 OthrRev                Number          8 No    No  No  No  No  No      8    36
     Number Type : Fixed point
     Digits to left of decimal = 6
  7 TotlRev                Number          9 No    No  No  Yes No  Virt    8   207
     Number Type : Fixed point
     Digits to left of decimal = 7
     Field calculation formula : Freight+PassRev+ChrtREv+OthrRev
  8 Fuel_BF                Number          8 No    No  No  No  No  No      8    44
     Number Type : Fixed point
     Digits to left of decimal = 6
  9 Fuel_DO                Number          8 No    No  No  No  No  No      8    52
     Number Type : Fixed point
     Digits to left of decimal = 6
 10 Fuel_SF                Number          8 No    No  No  No  No  No      8    60
     Number Type : Fixed point
     Digits to left of decimal = 6
 11 Stevedo                Number          7 No    No  No  No  No  No      4    68
     Number Type : Fixed point
     Digits to left of decimal = 5
 12 Pilotag                Number          7 No    No  No  No  No  No      4    72
     Number Type : Fixed point
     Digits to left of decimal = 5
 13 PortCha                Number          7 No    No  No  No  No  No      4    76
     Number Type : Fixed point
     Digits to left of decimal = 5
 14 ComCTax                Number          7 No    No  No  No  No  No      4    80
     Number Type : Fixed point
     Digits to left of decimal = 5
 15 CommExp                Number          7 No    No  No  No  No  No      4    84
     Number Type : Fixed point
     Digits to left of decimal = 5
 16 MiscVoE                Number          7 No    No  No  No  No  No      4    88
     Number Type : Fixed point
     Digits to left of decimal = 5
 17 TotlVoE                Number          9 No    No  No  Yes No  Virt    8   215
     Number Type : Fixed point
     Digits to left of decimal = 7
     Field calculation formula : Fuel_BF+Fuel_DO+Fuel_SF+SteveDo+PilotAg+PortCh
a+ComCTax+CommExp+MiscVoE
 18 Lubrics                Number          8 No    No  No  No  No  No      8    92
     Number Type : Fixed point
     Digits to left of decimal = 6
 19 DryDRnM                Number          8 No    No  No  No  No  No      8   100
     Number Type : Fixed point
     Digits to left of decimal = 6
 20 SalWage                Number          7 No    No  No  No  No  No      4   108
     Number Type : Fixed point
     Digits to left of decimal = 5
 21 OthEmBe                Number          7 No    No  No  No  No  No      4   112
     Number Type : Fixed point
     Digits to left of decimal = 5
 22 FoodSub                Number          7 No    No  No  No  No  No      4   116
```

```
      Number Type : Fixed point
      Digits to left of decimal = 5
 23 PandIPr                Number          7 No    No  No    No    No  No      4   120
      Number Type : Fixed point
      Digits to left of decimal = 5
 24 HullIns                Number          7 No    No  No    No    No  No      4   124
      Number Type : Fixed point
      Digits to left of decimal = 5
 25 SupplDE                Number          7 No    No  No    No    No  No      4   128
      Number Type : Fixed point
      Digits to left of decimal = 5
 26 SupplSt                Number          7 No    No  No    No    No  No      4   132
      Number Type : Fixed point
      Digits to left of decimal = 5
 27 WaterEx                Number          7 No    No  No    No    No  No      4   136
      Number Type : Fixed point
      Digits to left of decimal = 5
 28 ClaimEx                Number          8 No    No  No    No    No  No      8   140
      Number Type : Fixed point
      Digits to left of decimal = 6
 29 OtVTxLi                Number          7 No    No  No    No    No  No      4   148
      Number Type : Fixed point
      Digits to left of decimal = 5
 30 CharHir                Number          8 No    No  No    No    No  No      8   152
      Number Type : Fixed point
      Digits to left of decimal = 6
 31 MiscRuE                Number          7 No    No  No    No    No  No      4   160
      Number Type : Fixed point
      Digits to left of decimal = 5
 32 TotlRuE                Number          9 No    No  No    Yes   No  Virt    8   223
      Number Type : Fixed point
      Digits to left of decimal = 7
      Field calculation formula : Lubrics+DryDRnM+SalWage+OthEmBe+FoodSub+PandIP
r+HullIns+SupplDE+SupplSt+WaterEx+ClaimEx+OtVTxLi+CharHir+MiscRuE
 33 VslDepC                Number          7 No    No  No    No    No  No      4   164
      Number Type : Fixed point
      Digits to left of decimal = 5
 34 VslDepA                Number          7 No    No  No    No    No  No      4   168
      Number Type : Fixed point
      Digits to left of decimal = 5
 35 TotlCapEx              Number          8 No    No  No    Yes   No  Virt    8   231
      Number Type : Fixed point
      Digits to left of decimal = 6
      Field calculation formula : VslDepC + VslDepA
 36 TotlExp                Number         11 No    No  No    Yes   No  Virt    8   239
      Number Type : Fixed point
      Digits to left of decimal = 9
      Field calculation formula : TotlVoE+TotlRuE+TotlCapEx
 37 GrossOp                Number         11 No    No  No    Yes   No  Virt    8   247
      Number Type : Fixed point
      Digits to left of decimal = 9
      Field calculation formula : TotlRev - TotlExp
```

Appendix M-C

PROPOSED HARDWARE AND SOFTWARE SPECIFICATIONS

Based on MARINA Rate Adjustment System Requirements:

1 80386 CPU/ 4 MB RAM/ 150 MB HD/ 33 mHz/ 5.25 & 3.5 floppy
5 80286 CPU/ 1 MB RAM/ 12 mHz/ 5.25 & 3.5 floppy
5 Color Monitors
3 Uninterruptible Power Supplies 600W
3 Voltage Stabilizers 1000W
1 High Speed Printer
2 Laser Jet printer
1 Active Hub
5 Network Cards
1 Backup Unit

1 Novell Netware
6 MS-DOS ver 3.3 or higher
1 Backup & Restore Software
1 dBASE IV LAN version

Appendix M-D

OTHER INFORMATION REQUIREMENTS OF MARINA

MARINA's principal activities in regulating entry of vessels into routes are as follows.

a) evaluation of application for special permit (SP), provisional authority (PA), or certified public convenience (CPC);

b) hold public hearings to provide affected or "prior" operators on the applied route an opportunity to oppose the entry or change of schedule or capacity of the applicant;

c) issuance and release of either PAs, SPs, CPCs or notice of disapproval of application;

d) monitor the compliance of operators to the franchise requirements, more specially whether or not the franchise holder is adhering to the authorized route and schedule;

e) monitor the passenger and cargo load factors of liner vessels;

f) act on complaints of ship users with respect to irregularity, inadequacy, or nonavailability of services, and maintain a list of routes open for grant of franchise;

g) act on complaints of franchised holders against any illegal entry of vessels on their route or against any franchise regulations; and

h) continually assessing the needs of ship users for special types of shipping services.

SRRS noted that a Vessel Franchising System is presently installed at MARINA. This system adequately covers the information requirements to undertake activities b) and c), as mentioned above. However, it has been observed that prior to the issuance of any franchise, MARINA requires all operators to submit certified true copies of the ship's registration and statutory documents, the operator's audited financial statements, and proof of the project viability. In the exercise of issuing franchises, it therefore appears that a vast potential remains in generating more information to cover requirements of other activities. For one, the poor response in the submission of Annual Reports could be addressed by requiring every operator/applicant to submit his Annual Report for the past year (if he has not done so) prior to the release of the franchise.

SRRS recommends the development of a **Route Measured Capacity Monitoring System** which could provide an up-to-date assessment of vessel capacity in relation to traffic and could provide prevailing load factor estimates which help determine the prevailing actual costs per unit-mile; this may include traffic data from Annual Reports, from institutional shippers, or from PPA and data from the Vessel Franchising System, among others.

Information Requirements to Undertake Safety Functions

SRRS recommends the development of a Maritime Casualties and Claims Monitoring System which would provide data for causes and cost of casualties as well as provide the basis for actuarial analysis of insurance and claims cost.

MARINA is presently undertaking a project on upgrading of maritime safety with technical assistance provided by JICA. Said project is expected to generate the information systems in support of safety administration.

Information Requirements to Effectively Supervise Service Standards

SRRS recommends the development of a **Service Standards Monitoring System** which could appraise the performance of ship operators as well as assess any possible effects of a fork tariff; this may include vessel inspection reports, certificates of compliance with policies and standards, and records of complaints by shippers, passengers, or vessel competitors, among others.

Information Requirements to Prepare an Industry Development Program

One of the most significant activity of MARINA in carrying out its developmental functions is the preparation of a Maritime Industry Development Program. It not only covers all maritime sectors but also involves plans, policies,

projects, and institutional framework by which the program objectives could be obtained.

Being so wide in scope, only the major information requirements in preparing the Maritime Industry Development Program are listed herein.

Domestic Shipping Sector

a) Domestic merchant fleet by type, by capacity, (GRT, DWT, Passenger Capacity, TEUs, PCUs, etc. as relevant to the type of vessel), and by age—this will be used in generating:

- total capacity/tonnage
- forecast schedule of vessel replacement based on age but subject to supply-demand relationship
- forecast of potential demand for shipbuilding and/or ship repair

b) Vessel productivity by type, by capacity, and by age—this will be expressed in terms of traffic served per unit capacity, e.g. tons served per DWT of vessel; with this, the total lifting capacity of the fleet could be estimated and compared with total traffic in order to forecast additional tonnage requirements.

c) Domestic passenger and cargo traffic by type, by seasonality variations thereof—if the supply-demand analysis will be performed on an aggregate basis instead of a route-by-route basis, this information will serve as basis for:

- traffic forecasts by type
- forecasting a schedule of additional vessel capacity requirement (by considering fleet obsolescence, the average productivity by ship type and ship size, and estimated traffic to be served during peak traffic season)

d) Charter, Sale, and Purchase reports on ships that could be used for domestic shipping trade—this will be used in estimating the total investment requirement for the early replacement of obsolescent and uneconomic vessels and the modernization and expansion of the Philippine merchant fleet.

Shipbuilding and Ship Repair Sector

e) Number, Capacity, and Capability of Philippine Shipbuilders—capability will be expressed not only in terms of past newbuilding experience

but also in terms of financial capability and cost performance, e.g. cost per ton of erected steel, cost of building per DWT or GRT by size range, etc.; this will be used in assessing the competitiveness of the local shipbuilding industry vis-a-vis importation or charter of second-hand tonnage. This in turn will be used in evaluating the policies affecting the competitiveness of the local shipbuilding industry and the impact of import restriction policies protecting the shipbuilders.

f) Number, Capacity, and Capability of Philippines Ship Repairers—this will be used in assessing the adequacy of ship repair facilities in meeting the drydocking and repair requirements of the domestic fleet as well a potential business from the importation of second-hand tonnage which may require refurbishing or refitting.

g) Vessels on order and under construction—this information will allow for adjustment in fleet capacity considering that these vessels under construction shall soon be a part of the fleet. This information could be obtained by developing a Ship Construction Monitoring System with data sources either through the MARINA Shipbuilding office inspection of shipyards, through a shipyard reporting system, or when the shipyards are required to apply for a Permit to Construct Vessel.

h) Price Index of Shipbuilding and Ship Repair Work—this will be used:

- in assessing the impact of cost increases in shipbuilding and ship repair on cost of shipping services;
- in assessing the competitiveness of Philippine shipyards;
- for analysis of policies, taxes, and/or incentives to be recommended for the development of the industry; and
- other economic analyses.

Overseas Shipping Sector

i) Overseas merchant fleet by type, by DWT capacity, and by age—this will be used in generating:

- total capacity/tonnage
- forecast schedule of vessel replacement based on age but subject to supply-demand relationship
- forecast of potential demand for ship repair

j) Foreign Trade (Imports, Exports) of the Philippines by commodity group and by trading partner—this will be used to forecast traffic by type of required carrier and to determine the corresponding fleet capacity required to garner a desirable share, e.g. 40% as espoused by the UNCTAD Code, in carriage of foreign trade.

k) Foreign Trade of the Philippines by trading partner and by flag of carrier—this will be used to project the schedule of additional tonnage requirement of the Philippines (by considering fleet obsolescence, the average productivity by ship type and ship type, and estimated traffic to be served if a target market share in carriage of trade is to be attained).

l) Charter, Sale, and Purchase reports on ships used for overseas shipping trade—this will be used in:

- estimating the total investment requirement for the early replacement of obsolescent and uneconomic vessels and the modernization and expansion of the Philippine merchant fleet;
- evaluating policies and projects related to chartering and/or purchase of vessels to be placed under Philippine flag.

Manpower Resource Development

m) Number of Officers and Ratings Serving Onboard Philippine Flag Vessels by Shipping Trade (Domestic and Overseas) and by Position—this information gives an idea of the magnitude of the employment generated by the Philippine flag vessels. Annual Reports submitted by domestic liners presently generate a part of this information requirement; POEA has statistics of employment generated by overseas trade vessels.

n) Number of Officers and Ratings Serving on Board Foreign Flag Vessels by Position—this information provides the other component of the seagoing labor force. When this information is totalled with the labor force onboard Philippine flag vessels, the total seagoing manpower base can be obtained and in turn define the total potential requirement for upgrading of manpower skills.

o) Number of Licenced Officers by Rank—this information generates the total supply of officers potentially available for employment and, when compared with the number of officers actively serving onboard vessels, can generate the extent of unemployment; the reservoir of officers available to cope with fleet expansion requirements is simultaneously defined.

p) Salary Sales of Officers and Ratings by Shipping Trade and by Type of Ship—this information will provide useful in:

- estimating inward foreign remittances of Filipino seamen engaged in overseas trade
- preparing economic studies such as shadow wage rates
- assessing the impact of salary adjustments by position on the cost of shipping services;
- policy impact studies such as the effects of the present system of licensure examinations, effects of promoting the expansion of the Philippines overseas fleet through bareboat chartering on domestic supply and salary rates of shipboard officers, etc.

q) Curriculum and Facilities of Education and Training for Seamen and IMO Standards—this information will enable MARINA and DECS to assess the adequacy of the education and training programs and facilities of Philippine maritime schools and training centers; based on forecasts of manpower training and upgrading needs, an investment program for manpower training could be estimated by the MIDP.

The above information requirements for the preparation of the MIDP may still vary depending on the forecasting models to be adopted by MARINA.

Information Requirements for Rendering Financial and Technical Assistance

MARINA's role in overseeing a program for rendering financial and technical assistance to maritime entities requires the following support information.

a) Ship Financing Terms and Conditions of Multilateral Sources including OECD;

b) Ship Financing Terms and Conditions offered by Private Shipyards and Financing Companies;

c) Financing and Loan Guaranty Policies set by the Philippine Monetary Board;

d) Technical Assistance Programs for Multilateral and Bilateral Aid Sources;

e) Technical Information as may be gathered through subscriptions and

journals, periodicals, and special reports of professional; and

f) Monitor of needs of maritime entities for financial/technical assistance and evaluation of financial/technical assistance provided to them, either singly or collectively.

Information Requirements for Promoting Investments

MARINA's role in promoting investments involves the following activities.

a) determining the areas of investment and the quantum of investment needs over a period of time—the MIDP is expected to define these;

b) determining the economic desirability and financial viability of investment projects under the MIDP and recommending incentives where viability could be enhanced through fiscal measures;

c) recommending policy measures to attain the investment targets, i.e. examining the cabotage law, the foreign investment law, etc.

In support of the aforementioned activities, the following information may prove useful:

a) sectoral input-output table;

b) codification of investment laws;

c) shadow price studies on foreign exchange and labor;

d) studies on travel time costs;

e) Studies on marginal opportunity cost rate of capital;

f) analyses of project cost components, breaking down each component into materials, labor, taxes, and value added and further into domestic and foreign currency; and

g) strategy papers, investment promotions programs, and other information of investments from other countries.

Chapter 2

SHIPPERCON DATABASE DEVELOPMENT

Existing Computer System

SHIPPERCON has two stand-alone microcomputers both equipped with 40 megabytes hard drive, color monitor and printer. Currently, the use of these computers are limited to wordprocessing and spreadsheets. Although there is potential in expanding their use in order to meet SHIPPERCON's database requirements, there is no qualified person to do the job. Just recently, however, two employees were sent to an introductory dBase class. This is a good start, however, advance dBase classes and programming courses are still recommended for these two employees to further their knowledge and skills in database development.

Data Analysis

The existing processing of data was studied in detail through interviews, examination of forms and procedures, data collection, storage and retrieval, and actual walk-through with members of the staff. SHIPPERCON's new areas of responsibility were also studied through interviews and simulation of processing.

Generally, the following areas of responsibility of SHIPPERCON receive manual processing of data: shipping freight rates, waivers from PD 1466, cargo handling rates, port charges, cargo consolidators, freight forwarders, non-vessel operating common carriers, and handling of complaints. The volume of data involved in these functions is so great that automation becomes the only answer.

Shipping Freight Rates

Shipping freight rates can be divided into international and domestic with SHIPPERCON's work mostly concentrated on international. International freight rates can be subdivided into four major areas: US and Canada; Australia, New Zealand and Papua New Guinea; Asia; and Europe. These four areas can be

categorized into Shipping and Non-Shipping Conference. SHIPPERCON collects information for any new tariff rates from shipping conference or shipping lines. Whenever possible, SHIPPERCON keeps old tariff rates for historical and statistical purposes. Inquiries concerning freight rates are handled by manually searching through the files.

Cargo Handling and Port Charges

SHIPPERCON has basically the same procedure for cargo handling and port charges as in shipping freight rates.

Waiver from P.D. 1466

Waiver applications from P.D. 1466 are assigned an ID number composed of the month they are received and a sequential number. Waivers are then filed. At the end of each month, quarter, or year, SHIPPERCON produces a summary report in a spreadsheet showing the volume of trade in metric tons by country and countries of interest.

Cargo Consolidators, Breakbulk Agents, and Freight Forwarders

These three areas will have the same file format since a common registration form was established for all of them. Manually filing these three areas will be difficult because each cargo consolidator will have one or more matching breakbulk agents. This goes true with each freight forwarders having one or more principals or agents, and each NVOCC will have also one or more principals. It becomes even more complicated since a company registered as a cargo consolidator can also be a freight forwarder or NVOCC or both.

Complaints

Complaints against shipping lines, shippers, cargo consolidators, etc. will be filed. Each complaint will be compared with other complaints to check for similarities between nature of complaints and companies being complained against. Complaints will also be cross-checked with other files to obtain/verify important information like nature of business and address information. Any action against each complaint will also be filed together with the person's name who responded to the complaint. Any other follow-up action against each complaint will be recorded for further analysis.

Proposed Rate Monitoring System

Rate monitoring will be a new function of SHIPPERCON as recommended by SRRS team. The following is a description of how rate monitoring will be done.

To effectively monitor the cargo rates for domestic shipping, SHIPPERCON must have the actual rates charged by shipping lines. This information is available from the Bill of Lading. Copies of the Bill of Lading can be obtained from the Philippine Port Authority (PPA) or National Census and Statistics Office (NCSO). Currently, NCSO is capturing these data onto disk, but the information is not complete since it is not mandatory in their computer to enter all information. But, according to NCSO, this can be implemented easily. Once this has been done, data can be obtained from NCSO via a diskette and this can be imported to SHIPPERCON's rate monitoring system. Actual rates will be compared with authorized rates within a certain limit, e.g. +/- 10 percent. It is important to note that NCSO is adopting a 5 digit commodity code and MARINA is using a commodity code by class, which are, A, B, C and C Basic. Thus, a translation is necessary. Any questionable rates will be recorded, printed and analyzed.

Data from NCSO, by the way, would be around six months old before reaching SHIPPERCON. SHIPPERCON has thought of another option by coding the cargo manifest or the Bill of Lading themselves once their regional offices become present in at least 18 major ports.

System Requirements

Based on the analysis of existing data flow and processes, and on discussions with users, the following system requirements are defined:

Shipping Freight Rates

One file will be created for each area under the shipping and non-shipping conferences. There must be an immediate access on freight rates by commodity and destination. In order to do this, commodity classifications must be coded. They may establish their own or adopt a commodity code accepted by world standards like the Harmonized Tariff Schedule of the U.S.

Cargo Handling Rates and Port Charges

Since these two are interrelated, their files can be combined into one master file. When making a query by port or location, there should be an option to just see either one of the two but not both at the same time.

Waivers

Each waiver must be identified by month and year. Because of this, the ID of each waiver will change by the addition of the last digits of the year. Summary or totals may be generated by company, country, month or year. There must be immediate access on company and country fields.

Cargo Consolidator, NVOCC, and Freight Forwarders

A master file must be set up for all these three combined. But there must be a field that identifies the category of the company, i.e., either one of the three or combination. Three separate files will be created that will be related or linked with the master file by company. These three files will be for breakbulk agents, NVOCC's principals, and freight forwarder's principals. There must be immediate access on company, port and location.

Complaints

A file will be created to keep track of complaints and another file to keep track of actions taken. This is necessary because there could be one or more actions for a particular complaint. These two files must be linked by an ID. The complaint file must be linked with freight rates, cargo consolidator, NVOCC, and freight forwarders by company.

Rate Monitoring

One file will be used to hold the authorized rates, and another to hold the actual rates. There must be a function to import data from NCSO and filter fields or add fillers to suit NCSO's file specifications if there will be future changes. Another file in table form must be created to hold the commodity translation formula.

Overall

The system must be menu-driven with on-line help available almost anytime. There must be query type retrieval of information and query type report generator. There should be a provision of different security levels. Easy to use backup and restore functions should be available to users with supervisory privelege.

Wordprocessing, spreadsheet and other files

There must be an application that will organize these files by subject or project showing the author of the document, date file was last updated, etc.

Software Recommendations

The following are alternatives for choosing the appropriate software applications.

dBase III+ and/or Clipper

These software packages offer flexibility and control of the database programs. They require extensive programming, thus a full-time computer programmer is recommended. The complexity of SHIPPERCON's database may make maintenance of the database a bit difficult and the need for a full-time programmer even greater.

Fourth Generation Relational Database Management Utility.

Although powerful enough, this type of software package does not offer as much flexibility and control of the database program as dBase III and Clipper. Its notable advantage though is that it requires very little programming, therefore eliminating the need for a full-time programmer. A staff member(s) with programming experience and knowledge in relational database will need to attend a training in the use of this software. DataEase and FilePro are examples of this type of software. Both may be used for SHIPPERCON's database requirements.

To meet the needs in organizing word processing, Lotus and other related files, a librarian software package like Reference Point is recommended. This software creates an index card for each file showing subject, author, date modified and comments.

Hardware Recommendations

SHIPPERCON's database design is modular, thus databases that need immediate implementation can be installed first. The immediate requirements of SHIPPERCON are in the following areas: cargo consolidator, breakbulk agent, NVOCC, freight forwarder, and handling of complaints. Implementation of these calls for a new microcomputer with 80-megabytes hard drive and 80386 processor. This microcomputer can be used as a network server later when all system requirements have been implemented.

Local Area Network (LAN). There will be a need to purchase a main computer (also known as a server) to implement SHIPPERCON's entire requirements with at least six workstations. The main computer will have 150 megabytes of disk space running under Novell netware on disk operating system (DOS) environment. The two existing computers at SHIPPERCON may be used as additional workstations (the server itself may be configured as a workstation). Two workstations must be dedicated for communications with regional offices.

A LAN setup will make the computer system very flexible. This flexibility is important when the need to add workstations or tie up with another agency such as MARINA or Department of Trade arises.

Appendix S-C shows the proposed hardware and software requirements.

Implementation Plan

Appendix S-D shows the activities and time frame in implementing the database system. A programmer analyst will do all the job up to conversion to the new system. The programmer analyst will review this document, write programs, meet with users, train users and write a user manual. It is recommended that the person that will be assigned to maintain the system works full time with the programmer analyst.

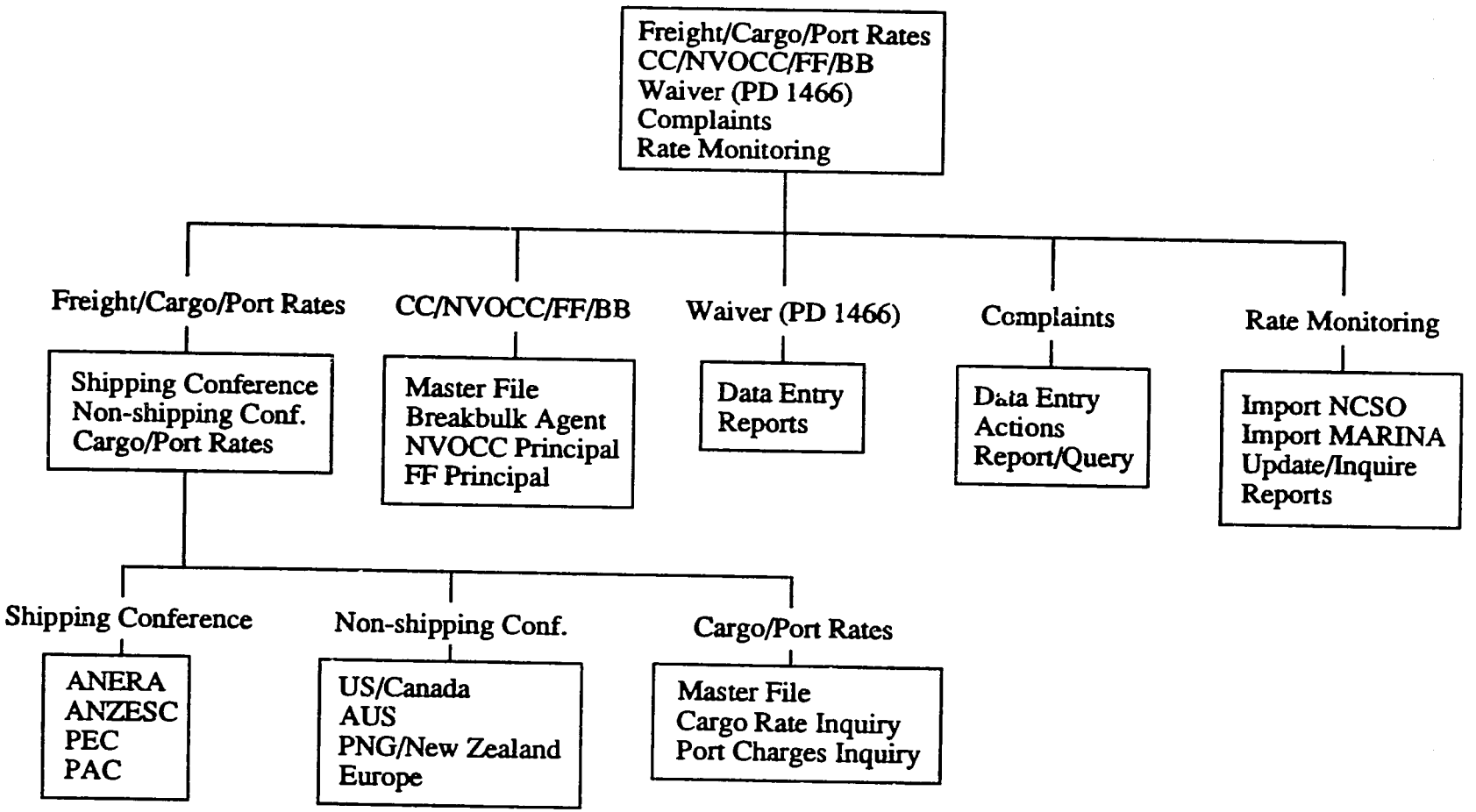
Staff Management

One person which we can call computer help can manage the system. The computer help should have some knowledge in relational database. That person does not have to be a full-time computer person. His or her assistance is only needed when performing database restore, archiving files, reorganizing databases, and other minor things. The computer help is not expected to do major modificatons in the database. Assistance in hardware is recommended to be done outside the firm to eliminate extra staffing.

Appendix S-A

TOP-LEVEL FUNCTIONAL DIAGRAM OF SHIPPERCON

Top-level Functional Diagram of SHIPPERCON Database



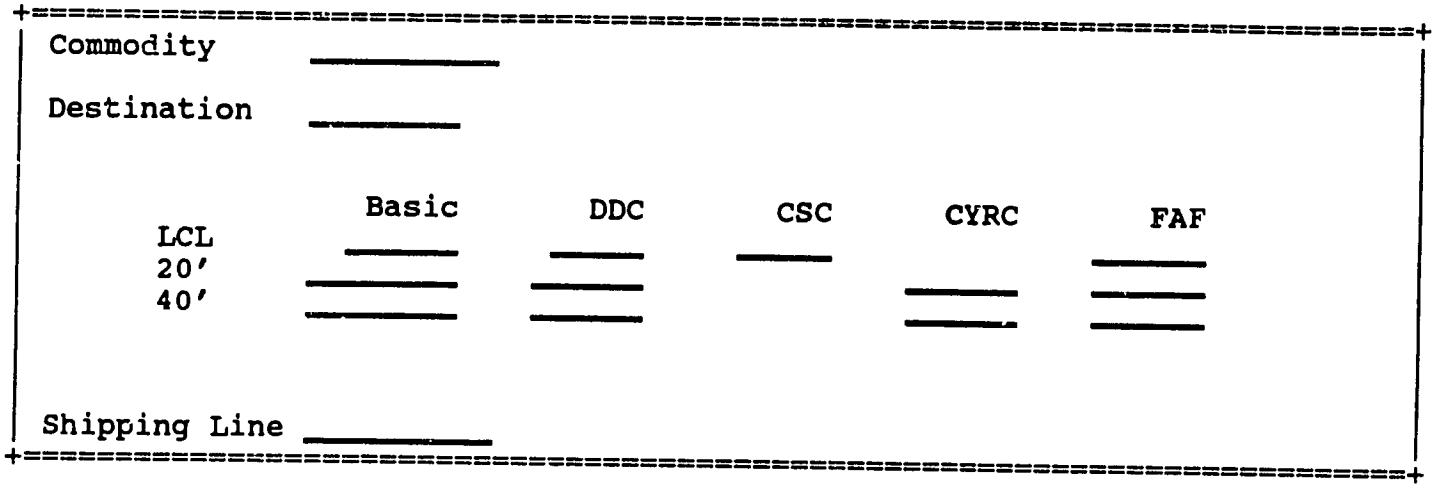
Appendix S-B

DATA ENTRY SCREENS/FILE STRUCTURE

FORM ANERA Rate

Asia - North America East Bound Rate Agreement (ANERA)

Freight Rates



FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	Commodity	Text	10	Yes	Yes	Yes	Yes	No	No	10	4
	Field calculation formula : lookup "Anera Commodity" Code										
	Field Help: If Commodity was not accepted, Press F10 to search/add Commo										
2	Destination	Choice	8	Yes	Yes	Yes	No	No	No	1	14
	Choice 1: W Coast										
	Choice 2: A&G										
	Choice 3: IPI										
	Choice 4: MLB-A										
	Choice 5: MLB-G										
	Choice 6: Canada W										
	Choice 7: Canada E										
	Field Help: Press F1 to list all choices										
3	Basic LCL	Number	6	No	No	No	No	No	No	4	15
	Number Type : Fixed point										
	Digits to left of decimal = 3										
4	DDC LCL	Number	5	No	No	No	No	No	No	4	19
	Number Type : Fixed point										
	Digits to left of decimal = 2										
5	CSC LCL	Number	5	No	No	No	No	No	No	4	23
	Number Type : Fixed point										
	Digits to left of decimal = 2										
6	FAF LCL	Number	6	No	No	No	No	No	No	4	27
	Number Type : Fixed point										
	Digits to left of decimal = 3										
7	BASIC 20	Number	8	No	No	No	No	No	No	8	31
	Number Type : Fixed point										
	Digits to left of decimal = 5										
8	DDC 20	Number	6	No	No	No	No	No	No	4	39
	Number Type : Fixed point										
	Digits to left of decimal = 3										
9	CYRC 20	Number	6	No	No	No	No	No	No	4	43

	Number Type : Fixed point Digits to left of decimal = 3										
10	FAF 20	Number	6	No	No	No	No	No	No	4	47
	Number Type : Fixed point Digits to left of decimal = 3										
11	Basic 40	Number	8	No	No	No	No	No	No	8	51
	Number Type : Fixed point Digits to left of decimal = 5										
12	DDC 40	Number	6	No	No	No	No	No	No	4	59
	Number Type : Fixed point Digits to left of decimal = 3										
13	CYRC 40	Number	6	No	No	No	No	No	No	4	63
	Number Type : Fixed point Digits to left of decimal = 3										
14	FAF 40	Number	6	No	No	No	No	No	No	4	67
	Number Type : Fixed point Digits to left of decimal = 3										
15	Shipping Line	Text	10	No	Yes	Yes	No	No	No	10	71

FORM AUS Rate

Australian & New Zealand/Eastern Shipping Conference (ANZESC)

Australia

Commodity: Class _

Destination _____

P/$ = _____

	TOTAL	CAF	BAF	CSC	CYRC	Basic
LCL	$_____	$_____	$_____	P_____		$_____
20'	_____	_____	_____		P_____	_____
40'	_____	_____	_____		_____	_____

FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	Commodity	Text	1	Yes	Yes	Yes	Yes	No	No	1	5
	Field calculation formula : lookup "ANZESC Commodity" Code										
	Field Help: If Commodity was not accepted, Press F10 to search/add Commo										
2	Destination	Choice	7	Yes	Yes	Yes	No	No	No	1	6
	Choice 1: AUS E/S										
	Choice 2: AUS W/N										
	Field Help: Pres F1 to list all choices										
3	KeyPto$	Text	1	No	No	No	Yes	No	Virt	1	109
	Field calculation formula : "1"										
	Field Display Attribute: Highlight 3										
4	Pto$	Number	5	No	No	No	Yes	No	Virt	4	110
	Number Type : Fixed point										
	Digits to left of decimal = 2										
	Field calculation formula : lookup "Exchange Rate" "P/$"										
5	Total LCL	Number	5	No	No	No	No	No	No	2	7
	Number Type : Integer										
6	CAF LCL	Number	8	No	No	No	Yes	No	No	8	9
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : Total LCL * 0.73										
7	BAF LCL	Number	8	No	No	No	Yes	No	No	8	17
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : 5.45										
8	CSC LCL	Number	8	No	No	No	Yes	No	No	8	25
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : 138										
9	Basic LCL	Number	8	No	No	No	Yes	No	No	8	33
	Number Type : Fixed point										
	Digits to left of decimal = 5										

	Field calculation formula : Total LCL-CAF LCL-BAF LCL-CSC LCL/Pto$										
10	Total 20	Number	5	No	No	No	No	No	No	2	41
	Number Type : Integer										
11	CAF 20	Number	8	No	No	No	Yes	No	No	8	43
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : Total 20 * 0.73										
12	BAF 20	Number	8	No	No	No	Yes	No	No	8	51
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : 55										
13	CYRC 20	Number	8	No	No	No	Yes	No	No	8	59
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : 1177										
14	Basic 20	Number	8	No	No	No	Yes	No	No	8	67
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : Total 20-CAF 20-BAF 20-CYRC 20/Pto$										
15	Total 40	Number	5	No	No	No	Yes	No	No	2	75
	Number Type : Integer										
	Field calculation formula : Total 20 * 2										
16	CAF 40	Number	8	No	No	No	Yes	No	No	8	77
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : Total 40 * 0.73										
17	BAF 40	Number	8	No	No	No	Yes	No	No	8	85
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : 110										
18	CYRC 40	Number	8	No	No	No	Yes	No	No	8	93
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : 1649										
19	Basic 40	Number	8	No	No	No	Yes	No	No	8	101
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : Total 40-CAF 40-BAF 40-CYRC 40/Pto$										

FORM NZ/PNG Rate

Australian & New Zealand/Eastern Shipping Conference (ANZESC)

New Zealand & PNG

Commodity _____

Destination ___

	Basic	CAF	BAF	CSC	CYRC
LCL W	$___	____% $_____	$_____	$_____	P_____
LCL M	___	_____	_____	_____	_____
20'	_____	_____	_____		_____
40'	_____	_____	_____		_____

FIELD DESCRIPTIONS

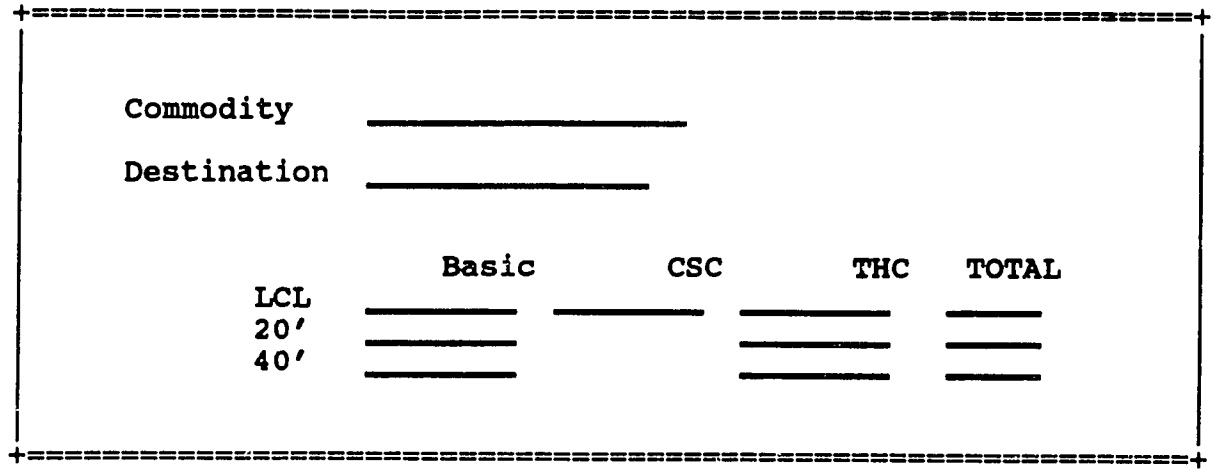
No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	Record offset
1	Commodity	Text	15	Yes	Yes	Yes	No	No	No	15	5
2	Destination	Choice	3	Yes	Yes	Yes	No	No	No	1	20
	Choice 1: NZ										
	Choice 2: PNG										
3	Basic LCL MT	Number	3	No	No	No	No	No	No	2	21
	Number Type : Integer										
4	CAFp	Number	5	No	No	No	Yes	No	Virt	4	101
	Number Type : Fixed point										
	Digits to left of decimal = 2										
	Field calculation formula : lookup "ANZESC % adj" CAF										
5	CAF LCL MT	Number	8	No	No	No	Yes	No	Virt	8	105
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : CAFp * Basic LCL MT / 100										
6	BAF LCL MT	Number	8	No	No	No	No	No	No	8	23
	Number Type : Fixed point										
	Digits to left of decimal = 5										
7	CSC LCL MT	Number	5	No	No	No	No	No	No	4	31
	Number Type : Fixed point										
	Digits to left of decimal = 2										
8	CYRC LCL MT	Number	8	No	No	No	No	No	No	8	35
	Number Type : Fixed point										
	Digits to left of decimal = 5										
9	Basic LCL CM	Number	3	No	No	No	No	No	No	2	43
	Number Type : Integer										
10	CAF LCL CM	Number	8	No	No	No	Yes	No	Virt	8	113
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : CAFp * Basic LCL CM / 100										
11	BAF LCL CM	Number	8	No	No	No	No	No	No	8	45
	Number Type : Fixed point										

	Digits to left of decimal = 5										
12	CSC LCL CM	Number	5	No	No	No	No	No	No	4	53
	Number Type : Fixed point										
	Digits to left of decimal = 2										
13	CYRC LCL CM	Number	8	No	No	No	No	No	No	8	57
	Number Type : Fixed point										
	Digits to left of decimal = 5										
14	Basic 20	Number	5	No	No	No	No	No	No	2	65
	Number Type : Integer										
15	CAF 20	Number	8	No	No	No	Yes	No	Virt	8	121
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : CAFp * Basic 20 / 100										
16	BAF 20	Number	8	No	No	No	No	No	No	8	67
	Number Type : Fixed point										
	Digits to left of decimal = 5										
17	CYRC 20	Number	8	No	No	No	No	No	No	8	75
	Number Type : Fixed point										
	Digits to left of decimal = 5										
18	Basic 40	Number	5	No	No	No	No	No	No	2	83
	Number Type : Integer										
19	CAF 40	Number	8	No	No	No	Yes	No	Virt	8	129
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : CAFp * Basic 40 / 100										
20	BAF 40	Number	8	No	No	No	No	No	No	8	85
	Number Type : Fixed point										
	Digits to left of decimal = 5										
21	CYRC 40	Number	8	No	No	No	No	No	No	8	93
	Number Type : Fixed point										
	Digits to left of decimal = 5										

FORM PAC Rate

Philippine Asia Conference (PAC)

Freight Rates



FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	Commodity	Choice	17	No	Yes	Yes	No	No	No	1	4
	Choice 1: Freight all kinds Choice 2: Reefer cargo Choice 3: Dangerous goods										
2	Destination	Text	15	No	Yes	Yes	Yes	No	No	15	5
	Field calculation formula : lookup "Asian Country" Country										
3	Basic LCL	Number	8	No	No	No	No	No	No	8	20
	Number Type : Fixed point Digits to left of decimal = 5										
4	CSC LCL	Number	8	No	No	No	No	No	No	8	28
	Number Type : Fixed point Digits to left of decimal = 5										
5	THC LCL	Number	8	No	No	No	No	No	No	8	36
	Number Type : Fixed point Digits to left of decimal = 5										
6	Total LCL	Number	5	No	No	No	No	No	No	2	44
	Number Type : Integer										
7	Basic 20	Number	8	No	No	No	No	No	No	8	46
	Number Type : Fixed point Digits to left of decimal = 5										
8	THC 20	Number	8	No	No	No	No	No	No	8	54
	Number Type : Fixed point Digits to left of decimal = 5										
9	Total 20	Number	5	No	No	No	No	No	No	2	62
	Number Type : Integer										
10	Basic 40	Number	8	No	No	No	No	No	No	8	64
	Number Type : Fixed point Digits to left of decimal = 5										
11	THC 40	Number	8	No	No	No	No	No	No	8	72
	Number Type : Fixed point Digits to left of decimal = 5										
12	Total 40	Number	5	No	No	No	No	No	No	2	80

FORM PEC Rate

Philippine Europe Conference (PEC)

Freight Rates

Tarrif Code Range: Min: _____
Max: _____

	Basic	CAF		BAF		CSC	MLA Addl
		____%		____%			
LCL W	____	____	____	____	____	____	____
LCL M	____		____		____		
20'	____		____		____		
40'	____		____		____		

FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	Tarrif Min	Num.String	6	Yes	Yes	Yes	Yes	No	No	6	5
	Field calculation formula : lookup "Tarrif Min" Tarrif										
	Field Help: Press F10 to search/add Tarrif										
2	Tarrif Max	Num.String	6	Yes	Yes	Yes	Yes	No	No	6	11
	Field calculation formula : lookup "Tarrif Max" Tarrif										
	Field Help: Press F10 to search/add Tarrif										
3	Basic LCL MT	Number	3	No	No	No	No	No	No	2	17
	Number Type : Integer										
4	CAFp	Number	5	No	No	No	Yes	No	Virt	4	31
	Number Type : Fixed point										
	Digits to left of decimal = 2										
	Field calculation formula : lookup "PEC % adj" CAF										
5	CAF LCL MT	Number	8	No	No	No	Yes	No	Virt	8	35
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : CAFp * Basic LCL MT / 100										
6	BAFp	Number	5	No	No	No	Yes	No	Virt	4	43
	Number Type : Fixed point										
	Digits to left of decimal = 2										
	Field calculation formula : lookup "PEC % adj" BAF										
7	BAF LCL MT	Number	8	No	No	No	Yes	No	Virt	8	47
	Number Type : Fixed point										
	Digits to left of decimal = 5										
	Field calculation formula : BAFp * Basic LCL MT / 100										
8	CSC LCL	Number	5	No	No	No	No	No	No	4	19
	Number Type : Fixed point										
	Digits to left of decimal = 2										
9	Xport Addl	Number	3	No	No	No	No	No	No	2	23
	Number Type : Integer										
10	Basic LCL CM	Number	3	No	No	No	No	No	No	2	25
	Number Type : Integer										
11	CAF LCL CM	Number	8	No	No	No	Yes	No	Virt	8	55

```
     Number Type : Fixed point
     Digits to left of decimal = 5
     Field calculation formula : CAFp * Basic LCL CM / 100
12 BAF LCL CM              Number          8 No   No  No   Yes  No  Virt    8    63
     Number Type : Fixed point
     Digits to left of decimal = 5
     Field calculation formula : BAFp * Basic LCL CM / 100
13 Basic 20                Number          5 No   No  No   No   No  No      2    27
     Number Type : Integer
14 CAF 20                  Number          8 No   No  No   Yes  No  Virt    8    71
     Number Type : Fixed point
     Digits to left of decimal = 5
     Field calculation formula : CAFp * Basic 20  / 100
15 BAF 20                  Number          8 No   No  No   Yes  No  Virt    8    79
     Number Type : Fixed point
     Digits to left of decimal = 5
     Field calculation formula : BAFp * Basic 20 / 100
16 Basic 40                Number          5 No   No  No   No   No  No      2    29
     Number Type : Integer
17 CAF 40                  Number          8 No   No  No   Yes  No  Virt    8    87
     Number Type : Fixed point
     Digits to left of decimal = 5
     Field calculation formula : CAFp * Basic 40 / 100
18 BAF 40                  Number          8 No   No  No   Yes  No  Virt    8    95
     Number Type : Fixed point
     Digits to left of decimal = 5
     Field calculation formula : BAFp * Basic 40 / 100
19 key                     Choice          3 No   No  No   Yes  No  Virt    1   103
       Choice  1: no
       Choice  2: yes
     Field calculation formula : yes
     Field Display Attribute: Highlight 3
```

FORM CC,NVOCC,FF

Master File of Cargo Consolidator, NVOCC, and Freight Forwarder

Company _____ Phone _____
Address _____ Fax _____
_____ Tlx _____
Type of Org _____ Contact _____

Business Operation (Put "yes" to all applicable)

	Years in operation
Non-Vessel Op Common Carrier ___	
Cargo Consolidator ___	___
Freight Forwarder ___	___
	___

Capital _____
Insurance Comp _____ Coverage _____

Destination/Port _____
B/L used _____
Rate _____

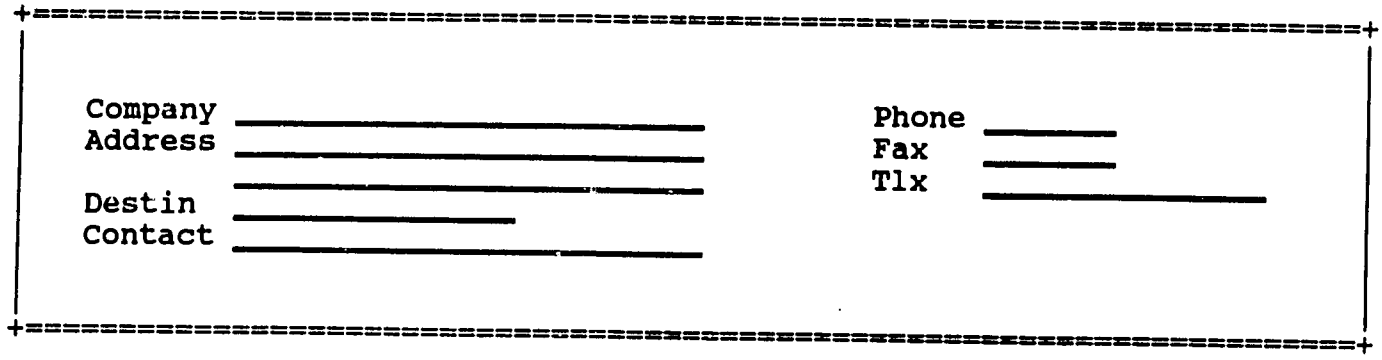
FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	Company	Text	25	Yes	Yes	Yes	No	No	No	25	5
2	Phone	Text	7	No	No	No	No	No	No	7	30
3	Street	Text	25	No	No	No	No	No	No	25	37
4	Fax	Text	7	No	No	No	No	No	No	7	62
5	City	Text	25	No	No	No	No	No	No	25	69
6	Tlx	Text	15	No	No	No	No	No	No	15	94
7	Type of Org	Choice	7	No	No	No	No	No	No	1	109
	Choice 1: Single										
	Choice 2: Partner										
	Choice 3: Corp										
8	CP2	Text	25	No	No	No	No	No	No	25	110
9	NVOCC	Choice	3	No	No	No	No	No	No	1	135
	Choice 1: no										
	Choice 2: yes										
10	Yr NVOCC	Number	2	No	No	No	No	No	No	1	136
	Number Type : Integer										
11	CC	Choice	3	No	No	No	No	No	No	1	137
	Choice 1: no										
	Choice 2: yes										
12	Yr CC	Number	2	No	No	No	No	No	No	1	138
	Number Type : Integer										
13	FF	Choice	3	No	No	No	No	No	No	1	139
	Choice 1: no										
	Choice 2: yes										
14	Yr FF	Number	2	No	No	No	No	No	No	1	140
	Number Type : Integer										
15	Capital	Number	10	No	No	No	No	No	No	8	141
	Number Type : Fixed point										
	Digits to left of decimal = 2										
16	Ins Co	Text	20	No	No	No	No	No	No	20	149

FORM NVOCC Principal

NVOCC _____ (from Master File)

NVOCC Principal



FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	NVOCC	Text	25	Yes	Yes	No	No	No	No	25	4
2	key	Text	3	No	Yes	No	Yes	No	Yes	3	29
	Field calculation formula : "yes"										
	View Security Required: High, Write Security Required: High										
	Field Display Attribute: Highlight 3										
3	Company	Text	25	Yes	Yes	No	No	No	No	25	32
4	Phone	Text	7	No	No	No	No	No	No	7	57
5	Street	Text	25	No	No	No	No	No	No	25	64
6	Fax	Text	7	No	No	No	No	No	No	7	89
7	City	Text	25	No	No	No	No	No	No	25	96
8	Tlx	Text	15	No	No	No	No	No	No	15	121
9	Port	Text	15	Yes	Yes	No	No	No	No	15	136
10	CP2	Text	25	No	No	No	No	No	No	25	151

FORM Freight Fwd Princip

Freight Forwarder Principals

Company _____

Address _____ _____ Phone _____

_____ Fax _____

Country _____ Tlx _____

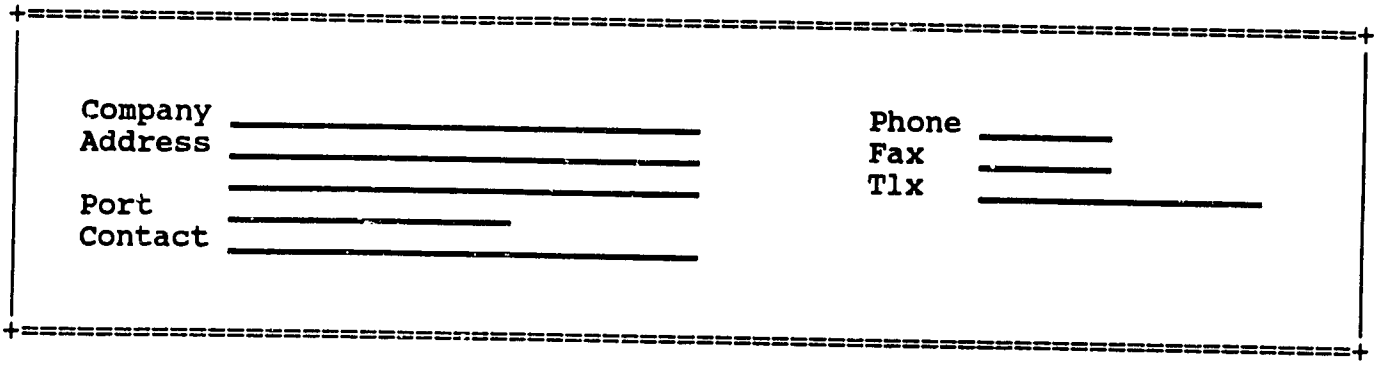
FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	Company	Text	25	Yes	Yes	No	No	No	No	25	3
2	key	Text	3	No	Yes	No	Yes	No	Yes	3	28
	Field calculation formula : "yes"										
	View Security Required: High, Write Security Required: High										
	Field Display Attribute: Highlight 3										
3	Street	Text	25	No	No	No	No	No	No	25	31
4	Phone	Text	7	No	No	No	No	No	No	7	56
5	City	Text	25	No	No	No	No	No	No	25	63
6	Fax	Text	7	No	No	No	No	No	No	7	88
7	Country	Text	15	No	No	No	No	No	No	15	95
8	Tlx	Text	15	No	No	No	No	No	No	15	110

FORM Break-Bulk Agent

Cargo Consolidator _____ (from Master File)

Break-Bulk Agent



FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	CC	Text	25	Yes	Yes	No	No	No	No	25	4
2	Company	Text	25	Yes	Yes	No	No	No	No	25	29
3	Phone	Text	7	No	No	No	No	No	No	7	54
4	Street	Text	25	No	No	No	No	No	No	25	61
5	Fax	Text	7	No	No	No	No	No	No	7	86
6	City	Text	25	No	No	No	No	No	No	25	93
7	Tlx	Text	15	No	No	No	No	No	No	15	118
8	Port	Text	15	Yes	Yes	No	No	No	No	15	133
9	CP2	Text	25	No	No	No	No	No	No	25	148

17	Amt of Coverage	Number	10	No	No	No	No	No	No	8	169
	Number Type : Fixed point											
	Digits to left of decimal = 2											
18	Port	Text	15	Yes	Yes	No	No	No	No	15	177
19	B/L used	Text	10	No	No	No	No	No	No	10	192
20	Rate	Number	8	No	No	No	No	No	No	8	202
	Number Type : Fixed point											
	Digits to left of decimal = 5											

FORM Waiver PD1466

Waiver from PD 1466

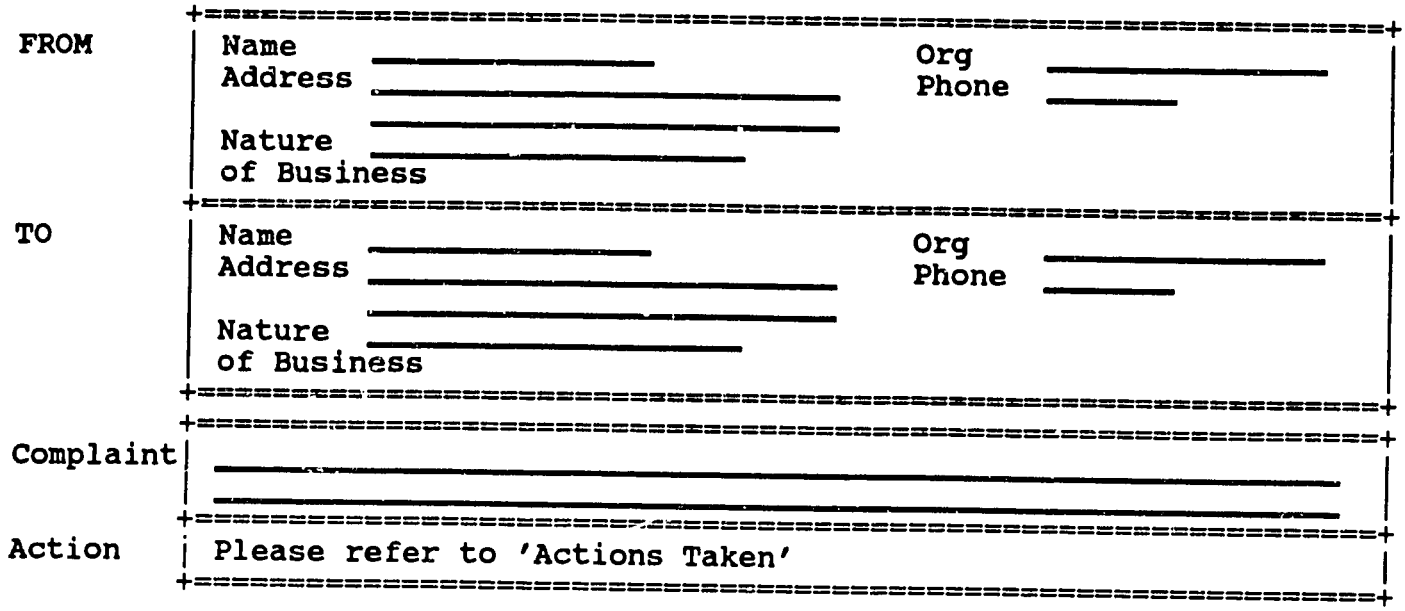
```
+=============================================================================+
|                    YY MM Sequence                                           |
| Waiver #           __-__-___                 Action Taken _                 |
|                                                                             |
| Company            _____________________                                    |
| Supplier (Buyer)   _____________________                                    |
|                                                                             |
| Origin:                                                                     |
|   Loadport         _____________________                                    |
|   Country          _____________  (press F10 to search/add                   |
|   Group            _____________          country and/or group)             |
|                                                                             |
| Commodity          ____________________________________________             |
|                                                                             |
| Gr Weight          _________ MT                                             |
|                                                                             |
| Net Freight        $_________                                               |
|                                                                             |
| NF/MT              _________                                                |
+=============================================================================+
```

FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	Record offset
1	YY	Num.String	2	Yes	Yes	Yes	No	No	No	2	4
2	MM	Num.String	2	Yes	Yes	Yes	No	No	No	2	6
3	Seq	Num.String	3	Yes	Yes	Yes	No	No	No	3	8
4	Action Taken	Choice	1	No	No	No	No	No	No	1	11
	Choice 1: A										
	Choice 2: D										
	Field Help: A = Approved, D = Disapproved										
5	Imp_Exp	Text	20	No	Yes	No	No	No	No	20	12
6	Supplier	Text	20	No	No	No	No	No	No	20	32
7	LoadPort	Text	20	No	No	No	No	No	No	20	52
8	Country	Text	11	Yes	Yes	No	Yes	No	No	11	72
	Field calculation formula : lookup "List of Countries" Country										
9	Group	Text	11	Yes	Yes	No	Yes	No	No	11	83
	Field calculation formula : lookup "List of Countries" Group										
10	Commodity	Text	40	No	No	No	No	No	No	40	94
11	Gr Weight	Number	9	No	No	No	No	No	No	8	134
	Number Type : Fixed point										
	Digits to left of decimal = 6										
12	Net Freight	Number	10	No	No	No	No	No	No	8	142
	Number Type : Fixed point										
	Digits to left of decimal = 7										
13	NFperMT	Number	9	No	No	No	Yes	No	Virt	8	150
	Number Type : Fixed point										
	Digits to left of decimal = 6										
	Field calculation formula : Net Freight/Gr Weight										

FORM Complaints

Complaint # _____ Date _____

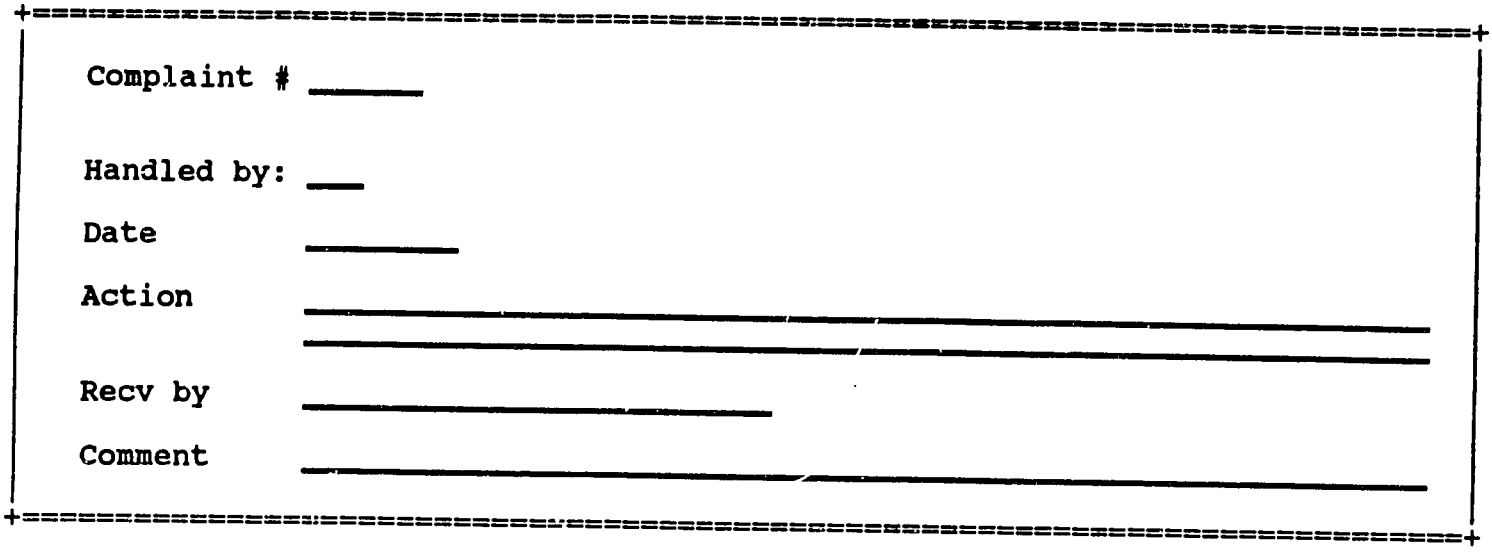


FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	Complaint ID	Num.String	6	Yes	Yes	Yes	No	No	No	5	4
2	Date	Date	8	No	No	No	Yes	No	No	6	9
	Field calculation formula : curr(date)										
3	Name	Text	15	No	No	No	No	No	No	15	15
4	Org	Text	15	No	No	No	No	No	No	15	30
5	Street	Text	25	No	No	No	No	No	No	25	45
6	Phone	Text	7	No	No	No	No	No	No	7	70
7	City	Text	25	No	No	No	No	No	No	25	77
8	Bus	Text	20	No	No	No	No	No	No	20	102
9	ToName	Text	15	No	No	No	No	No	No	15	122
10	ToOrg	Text	15	No	No	No	No	No	No	15	137
11	ToStreet	Text	25	No	No	No	No	No	No	25	152
12	ToPhone	Text	7	No	No	No	No	No	No	7	177
13	ToCity	Text	25	No	No	No	No	No	No	25	184
14	TOBus	Text	20	No	No	No	No	No	No	20	209
15	Complaint1	Text	60	No	No	No	No	No	No	60	229
16	Complaint2	Text	60	No	No	No	No	No	No	60	289

FORM Complaint Action

Action to Complaint



FIELD DESCRIPTIONS

No.	Name	Type	Long	Reqd	Index	Unique	Derived	Rng Chk	Prevent	Record size	offset
1	Complaint #	Num.String	6	Yes	Yes	No	No	No	No	5	3
2	Handled by	Text	3	No	No	No	No	No	No	3	8
3	Date	Date	8	No	No	No	No	No	No	6	11
4	Action1	Text	60	No	No	No	No	No	No	60	17
5	Action2	Text	60	No	No	No	No	No	No	60	77
6	Recv by	Text	25	No	No	No	No	No	No	25	137
7	Comment	Text	60	No	No	No	No	No	No	60	162

Appendix S-C

PROPOSED HARDWARE AND SOFTWARE SPECIFICATIONS

Based on entire SHIPPERCON System Requirements:

1 80386 CPU/ 4 MB RAM/ 150 MB HD/ 33 mHz/ 5.25 & 3.5 floppy
4 80286 CPU/ 1 MB RAM/ 12 mHz/ 5.25 & 3.5 floppy
4 Color Monitors
2 Uninterruptible Power Supplies 600W
2 Voltage Stabilizers 1000W
1 High Speed Printer
1 Laser Jet printer
2 Modem 2400 Baud
1 Active Hub
6 Network Cards
1 Backup Unit

1 Novell Netware
5 MS-DOS ver 3.3 or higher
1 Backup & Restore Software
1 DataEase LAN version
2 DataEase user packs
2 Carbon Copies communication software

Based on Immediate Requirements:

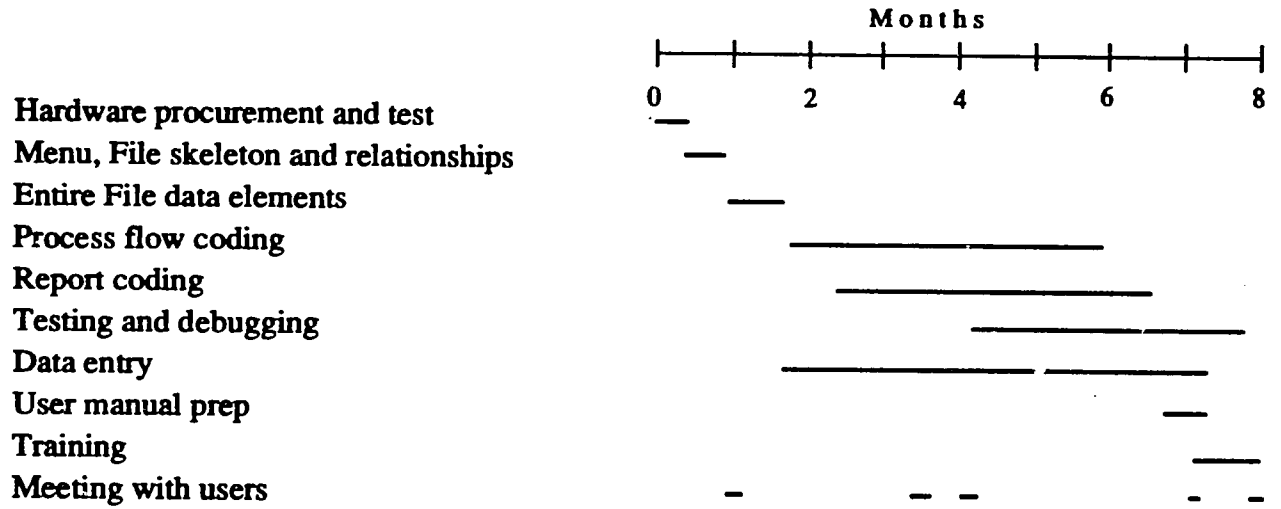
1 80386 CPU/ 2MB RAM/ 80 MB/ 33 Mhz/ 5.25 & 3.5 floppy
1 RGB Color Monitor
1 Voltage Stabilizer 500W
1 Uninterruptible Power Supply
1 High Speed Printer

1 MS-DOS ver 3.3 or higher
1 Backup/Restore sofware for floppies
1 DataEase standalone version

Appendix S-D

IMPLEMENTATION TIME FRAME FOR SHIPPERCON

Implementation TIme Frame for SHIPPERCON



Note: Shown above is for the entire needs of SHiPPERCON.
Around four months is reqd to implement immediate needs.

TERMS OF REFERENCE FOR SHIPPERCON DATABASE DEVELOPMENT

A programmer analyst with strong programmimg skills & relational database knowledge will implement this database. The programmer analyst will be responsible for the following:

a) Actual coding or programming

b) Write a System, Test Plan and Test Result Documentation

c) Prepare User's Manual

d) Conduct User Training