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**Ocean Freight Rate Database  
Phase 1 Technical Report**

**Douglas Benson  
Kimberly Vachal  
Trent Byberg**

**UGPTI Staff Paper No. 142**

**May 1999**

**UPPER GREAT PLAINS TRANSPORTATION INSTITUTE**  
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Disclaimer

The contents presented in this report do not necessarily reflect the views or policies of the U.S. Department of Agriculture, and are the sole responsibility of the Upper Great Plains Transportation Institute and the authors.

May 1999

## Acknowledgments

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## Disclaimer

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## INTRODUCTION

A variety of conditions in the current local U.S. agricultural industry result in the need for ag businesses to monitor existing markets and research potential markets for their products. The overabundant supply of many bulk agricultural goods grown in the U.S. forces many businesses to look for growth via foreign markets. Although there may be good potential demand in these markets, there are many market factors that will deter companies from entering these markets. One of the major factors affecting the existing and potential overseas markets is the transportation cost involved in getting these goods and products to market. The overseas markets must be able to absorb these transportation costs and still remain competitive within that region.

Ocean freight is the main transportation mode used for moving bulk agricultural products overseas. The increasingly competitive nature of this transportation sector requires businesses and governmental agencies to have up-to-date rates charged by the shipping companies. Access to rate quotes for specific commodities, routes, and carriers is available and can be obtained from numerous sources via e-mail, fax, or the Internet. This data is currently scattered and requires some effort to retrieve and compile. It follows that it would prove beneficial to be able to access all the rates from one central source.

The U.S. Department of Agriculture's Ag Export Assistance program began tracking and compiling containership rates for specific commodities being shipped to other countries in 1996. Shipping rate charges for container-loads of commodities such as potatoes, beef primals, and fresh apples were collected and compiled in a monthly report. Requests for reports to be compiled for different commodity rates increased as word got out about this program. The request increase soon became taxing on the resources available for this project. With this trend continuing, the USDA began looking for more efficient methods to get this information to those requesting it.

The previously adopted method started by collecting the required data from various sources on a monthly basis. The data is collected from other agencies, programs, and companies via fax or the Internet and entered into Excel tables. Then companies or individuals interested in

the current rates charged for specific commodities over specified routes would contact the Exporter Assistance Program and place a request for this information. As the calls came in, the Exporter Assistance Program would manually create report(s) based on the requests, and mail or fax them when completed.

## **PROJECT DESCRIPTION**

Although this process worked, the USDA felt it would be beneficial to reduce the resources and time it took to get this information to the requestors. The Upper Great Plains Transportation Institute, in conjunction with the USDA's Exporter Assistance Program, agreed to create an Access database that would automate some of the tedious work required to process these requests. The main functionality requested for this automation project were:

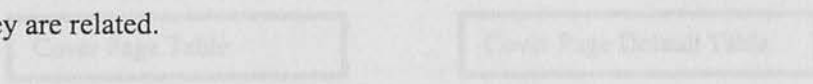
1. Store present and historical ocean freight rates in one central location.
2. Provide a useable interface for entering data into the database.
3. Automate the creation of monthly and historical reports by commodity, route, and month.
4. Provide output in a format that can be easily placed on the Internet for viewing, printing, and downloading.
5. Enter all historical data from the existing Ocean Freight Rate Bulletins into the final database.

## DATABASE DATA STORAGE UNITS

Storage of information in the database consists of several main tables along with some auxiliary tables to assist in the presentation and capture of data. The two main data tables are the Route table and the Rate table. All pertinent route and rate information is stored in these two tables. The Route table consists of information on the route and commodity for a particular month. The Rate table consists of all rate information for a specific carrier providing service over a route from the Route table. Codes for exceptions that may occur for a particular rate -- a rate may have been calculated in a different manner than the normal rate calculation for a commodity -- also stored in the Rate table. Output for these exceptions requires a note to be placed next to this rate in order to differentiate from other rates.

The next type of data to be captured in the database is the information printed on the cover of each monthly bulletin. This information includes: container size used to ship the commodity, definitions for market-share calculation, transit time, ocean rate calculation, container-rate calculation, definitions for abbreviations used in the bulletin, and USDA contact information. This data is dynamic and requires that the application allow the user to change this information for each bulletin printed. The cover page information must also be stored to allow for the printing of historical reports from the database. There are two tables that handle all the cover page data for the reports, CoverPage, and CoverPageDefault.

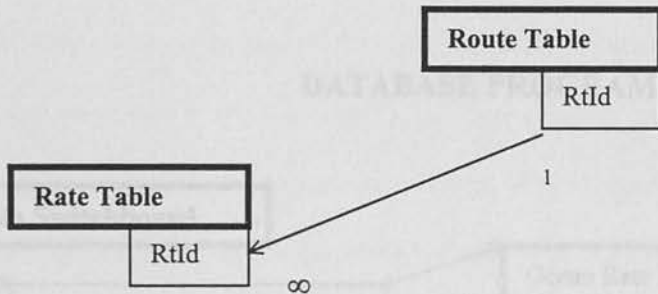
Other tables in the database consist of list-type information. The lists store information used to fill combo-boxes in the interface. Information such as routes, commodities, and carriers need to be captured by the program and updated as the database grows. The interface provides methods for adding and deleting from these lists. The following diagram shows the database tables and how they are related.



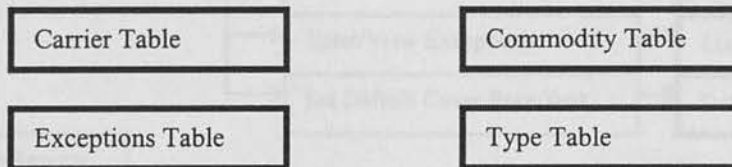


## DATABASE TABLE RELATIONSHIPS

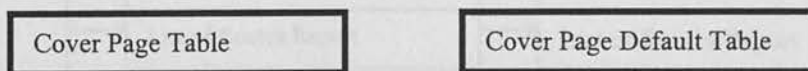
The Route and Rate tables are the main database tables holding all ocean rate data records. The Route table contains information about the commodity and the route the commodity is being shipped over. The Rate table contains the rate information for a route, commodity, and month for a specific carrier.



The following database tables hold the domain list-type information used in the combo boxes.



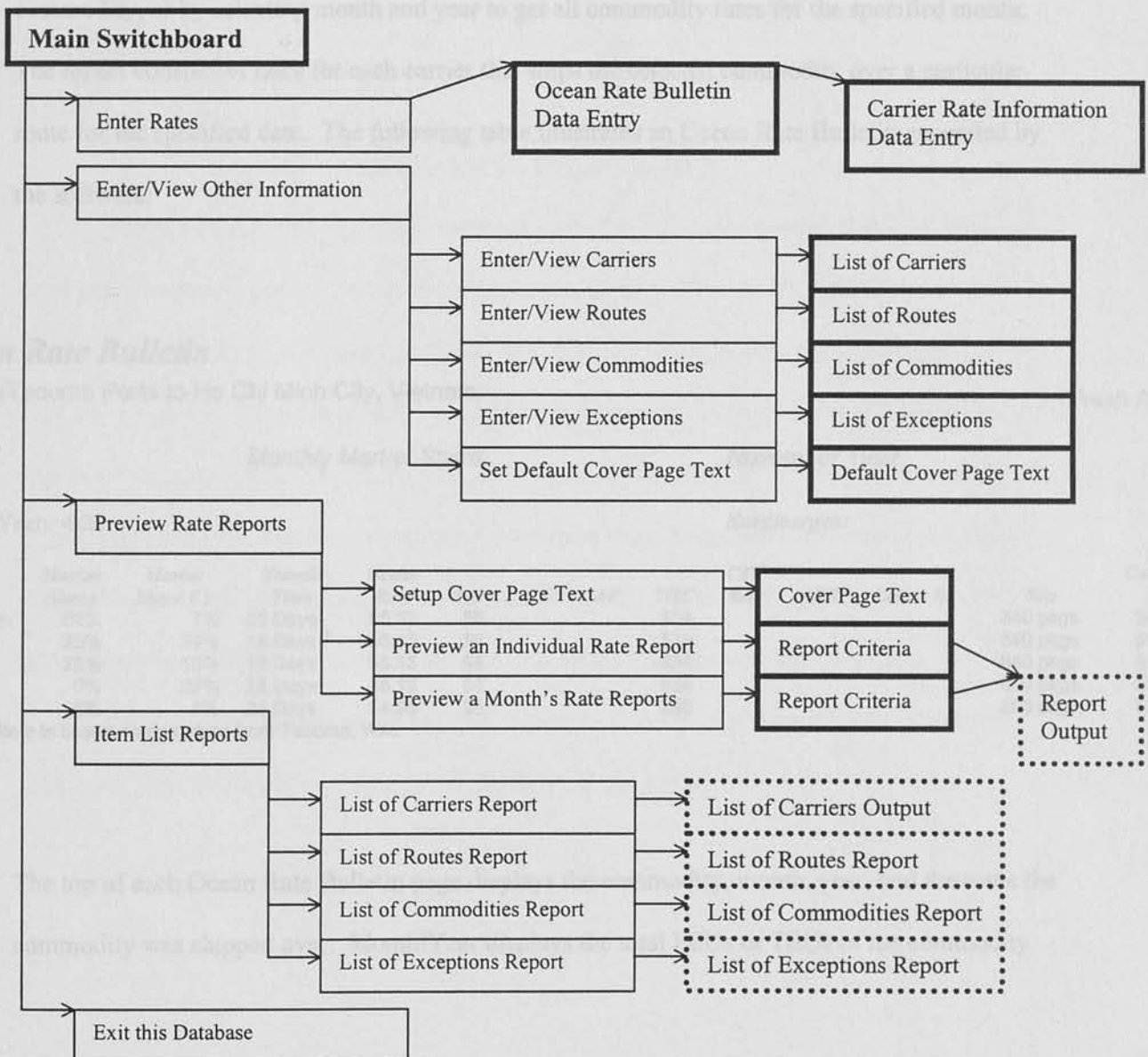
The following database tables store the information used in creating the Ocean Freight Rate Bulletin cover pages.



## DATA INTERFACE

The user data interface consists of both facilities for entering freight rate data and requesting reports from data already in the database. All the information necessary to create an Ocean Freight Rate Bulletin is captured via the user interface. The dynamic lists of carriers and routes also are stored and edited via the data interface. The following diagram illustrates the flow of the user data interface in the database.

### DATABASE PROGRAM FLOW



More detailed information on the user interface may be found in the User's Guide described later in this report.

## REPORT AUTOMATION

One of the major goals of this project is to relay container rate information to requestors in a fast, efficient manner. Automating the generation of the container rate reports is an integral part in accomplishing this goal. The user interface provides a means of accessing any container rates that are stored in the database. A user can select a report based on month, year, and commodity, or by selecting month and year to get all commodity rates for the specified month. The report consists of rates for each carrier that ships the selected commodity over a particular route for the specified date. The following table illustrates an Ocean Rate Bulletin generated by the software:

### *Ocean Rate Bulletin*

Seattle/Tacoma Ports to Ho Chi Minh City, Vietnam

Fresh Apples

Monthly Market Share

November 1997

Month\Year: 4\28

*Surcharges:*

<i>Carrier</i>	<i>Market Share</i>	<i>Market Share CY</i>	<i>Transit Time</i>	<i>Ocean Rate</i>	<i>BAF</i>	<i>CY</i>	<i>CAF</i>	<i>THC</i>	<i>CFS Rec</i>	<i>ARB</i>	<i>Cotton R.</i>	<i>Size</i>	<i>Container Rate</i>
Evergreen	50%	7%	26 Days	\$5.03	\$6			\$34				840 pkgs.	\$4,945
Maersk	25%	39%	18 Days <sup>3</sup>	\$5.13	\$6			\$34				840 pkgs.	\$5,029
APL	25%	18%	19 Days	\$5.13	\$6			\$34				840 pkgs.	\$5,029
OOCL	0%	29%	28 Days	\$5.13	\$6			\$34				840 pkgs.	\$5,029
Hanjin	0%	4%	26 Days	\$4.95	\$6			\$26				850 pkgs.	\$4,734

<sup>3</sup> Transit time is based on departure from Tacoma, WA.

The top of each Ocean Rate Bulletin page displays the commodity, month, year, and the route the commodity was shipped over. Month\Year displays the total FEUs or TEUs of the commodity

shipped over this route during the month and current year listed. The table displays monthly market share, current year market share, transit time, ocean rate, surcharges, amount of commodity shipped in a container, and the rate per container. Each carrier for which rate information was retrieved is represented in the table. Exceptions are numbered and listed at the bottom of each table. The exception in the example states that the transit time was based on departure from a different port than the other transit times listed in the table. Exceptions also may occur with the surcharges and rates. The most common surcharge or rate exception is that the value is given per container rather than per weight or volume. Also, some surcharges are already included in the container rate. If this is the case, the included surcharges are denoted by an "AI", or All Inclusive.

## **DATABASE PROPERTIES**

The remaining sections of this report consist of the database user's guide, the database table documentation, and the database query documentation. The user's guide describes the database interface in greater detail, and has pictures of the forms making up the interface. Instructions on how to access all database functionality can be found in the user's guide. The final section of this report describes each database table in detail including the properties of each field in the database tables. The main database queries used to generate the final ocean freight rate reports are included. These queries combine and group data by commodity, month, year, and route. The other main function of the queries is to merge the exception data with the corresponding record that has that exception. The merge queries are run each time a report is generated, and results of these queries are displayed in the report.



# OCEAN Rate Bulletin



## **DATABASE USER'S GUIDE**

Shipper & Exporter Assistance Program

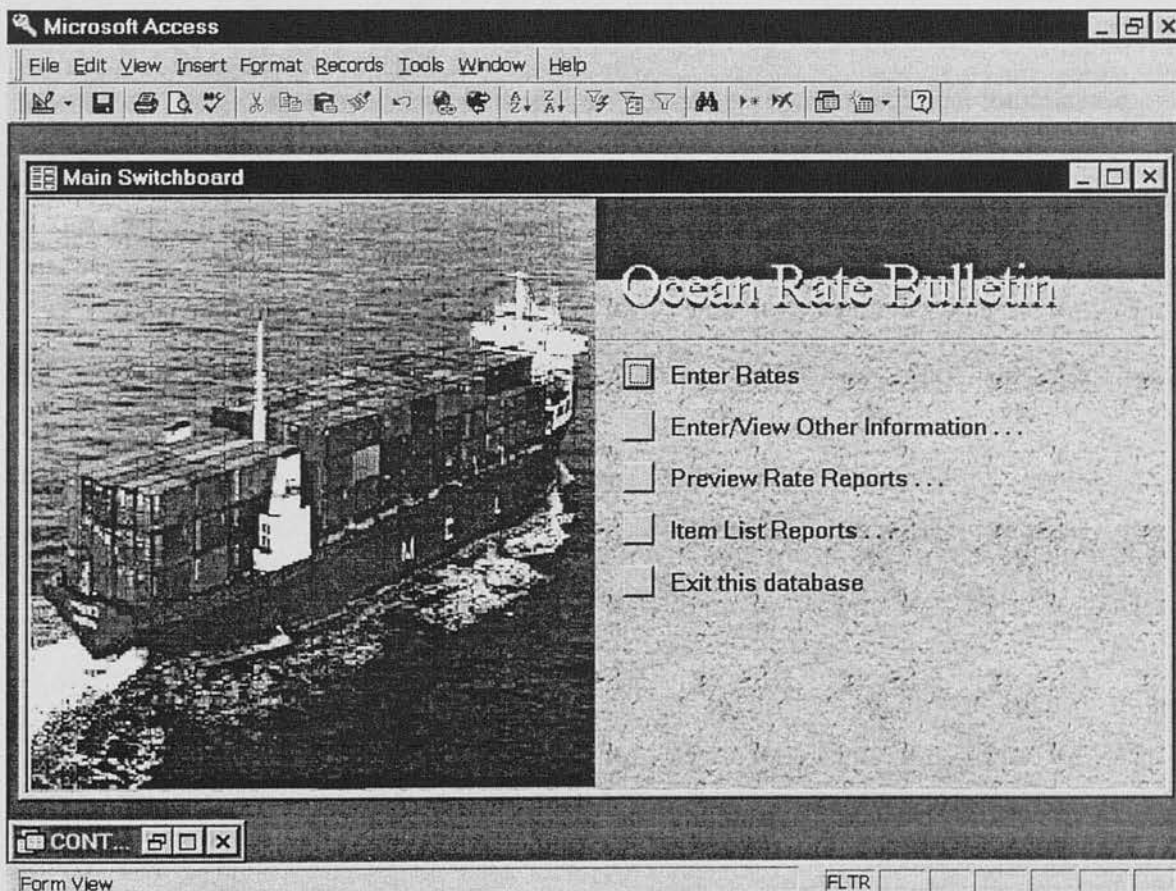
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## 1. Installing The Database

The USDA Ocean Freight Database is an Access database that runs on Access version 7.0. The entire database is contained in the file: Container.mdb. This file currently contains container rate records since 1997. If you have Access 7.0 installed on your computer, all that is required to run the program is to open the Container.mdb file from Access. Copy Container.mdb from the floppy disk to your hard drive. Then open this file from Microsoft Access.

## 2. Running The Database

When the file is opened, you will see the Main Switchboard form:





On this form, there are three options available to you.

1. Enter Rates
2. Enter/View Other Information ...
3. Preview Reports ...
4. Item List Reports ...
5. Exit This Database

Option 1 takes the user to screens where new ocean rate information can be entered into the database. From these screens, it is also possible to scroll through and edit/view rate information that already exists in the database. As the database grows, more commodities and routes will need to be kept track of. Functionality for managing the list-type information can be reached by clicking option 2. Output for the database is managed by functions accessed through options 3 and 4. From these options it is possible to preview and print Ocean Rate bulletins and list-type information. When all your database activities are completed, option 5 will exit the database.

Greater details of the functionality available through this screen are described in throughout the rest of this section of the user's guide.

## Enter Rates

To enter new rates, or view or edit existing rates, click the “Enter Rates” button. When you do this, the following screen will open up:

The screenshot shows a Microsoft Access window titled "Ocean Rate Bulletin" with a form titled "Ocean Rate Bulletin Data Entry". The form contains the following fields and controls:

- Issue Date: January 15, 1998
- Month of Rate Quote: October (dropdown menu)
- Year of Rate Quote: 1997
- Commodity: Fresh Grapefruit (WC) (dropdown menu)
- Route: LA./L.B./Oakland Ports To Hong Kong (dropdown menu)
- Monthly FEUs: 3.93
- Annual FEUs: 76.74
- Buttons: "Enter Carrier-Specific Info For This Table"
- Record navigation: Record: 1 of 1469
- Form View status bar at the bottom.

On this screen you will be able to insert/view/edit the information that describes a particular Ocean Freight Rate table. Fields included on this screen are:

- Issue Date
- Month of Rate Quote
- Year of Rate Quote
- Commodity
- Route
- Monthly FEUs
- Annual FEUs

You can select the Commodity, and Route fields from a list of possible commodities and routes. You also have the capability to add to these lists. This will be explained in more detail on page 7 of this manual.

**Enter Carrier-Specific Info:**

Once the information for a table has been entered, and you would like to enter or view the carrier-specific container rates for this table, click the “Enter Carrier-Specific Info For This Table” button. This will take us to the following Carrier Rate Information Form.

**Carrier Rate Information**

*Rates for Fresh Grapefruit (WC) from L.A./L.B./Oakland Ports To Hong Kong during October 1997*

TableID: 1465      Carrier: Maersk

Monthly FEUs For Carrier: [ ]      Exceptions:

Market Share: 50%      Transit Time(in days): 32

Market Share-CY: 71%      Ocean Rate: \$246.00

Surcharges:      Exceptions:

IBAF:	7.00	[ ]
THC:	0.00	[ ]
CAF:	-1.00	[ ]
CY:	0.00	[ ]
CFS Rec:	-1.00	[ ]
ARB:	-1.00	[ ]
Cotton P.:	-1.00	[ ]

Rate Type: Minimum Weight      Units: 21 KT

Container Rate: \$5.313      Exceptions:

[ ]      [ ]      [ ]

Record: 1 of 3 (Filtered)      Form View      FLTR

On this form, enter the carrier rates for each carrier associated with the route, commodity, and issue date table you have selected in the previous form. Fill in all the information that pertains to the particular carrier rate you are filling in. Rate fields default to a value of -1.

**Exceptions:**

Exceptions to fields can be accounted for on this page. Use the combo box to the right of the field you need to apply an exception to. Each field has a combo box that contains a list of possible exceptions for that field. You can add to the list of possible exceptions, and this will be described in more detail on page 11.

## **Container Rate:** *Carrier Information*

The Container Rate can be automatically calculated by selecting one of the three calculation methods – by KT, by package, or by container. Below the Container Rate field there are three command buttons representing each of the types of calculated Container Rates. Each of the method are described below:

Calculation for ocean rate on per weight (KT) basis:

$$\text{Container Rate} = [\text{Ocean Rate} \times (\text{KT})] + [\text{Ocean Rate} \times (\text{KT}) \times (\text{CAF})] + [\text{THC} \times (\text{KT})] + [\text{BAF} \times (\text{KT})] + \text{ARB}$$

Calculation for ocean rate on per package (pkg.) basis:

$$\text{Container Rate} = [\text{Ocean Rate} \times (\text{pkg})] + [\text{Ocean Rate} \times (\text{pkg}) \times (\text{CAF})] + [\text{THC} \times (\text{KT})] + [\text{BAF} \times (\text{KT})] + \text{ARB}$$

Calculation for ocean rate on per container basis:

$$\text{Container Rate} = \text{Container Rate} + [\text{Container Rate} \times (\text{CAF})] + [\text{THC}] + [\text{BAF}] + \text{ARB}$$

You will receive an error message if you have some of the pertinent Ocean Rate calculation information missing.

You can override the automated calculation of the container rate by simply entering your rate in the Container Rate Field.

There are three other command buttons on the bottom right side of this form.

### **Back Button:**

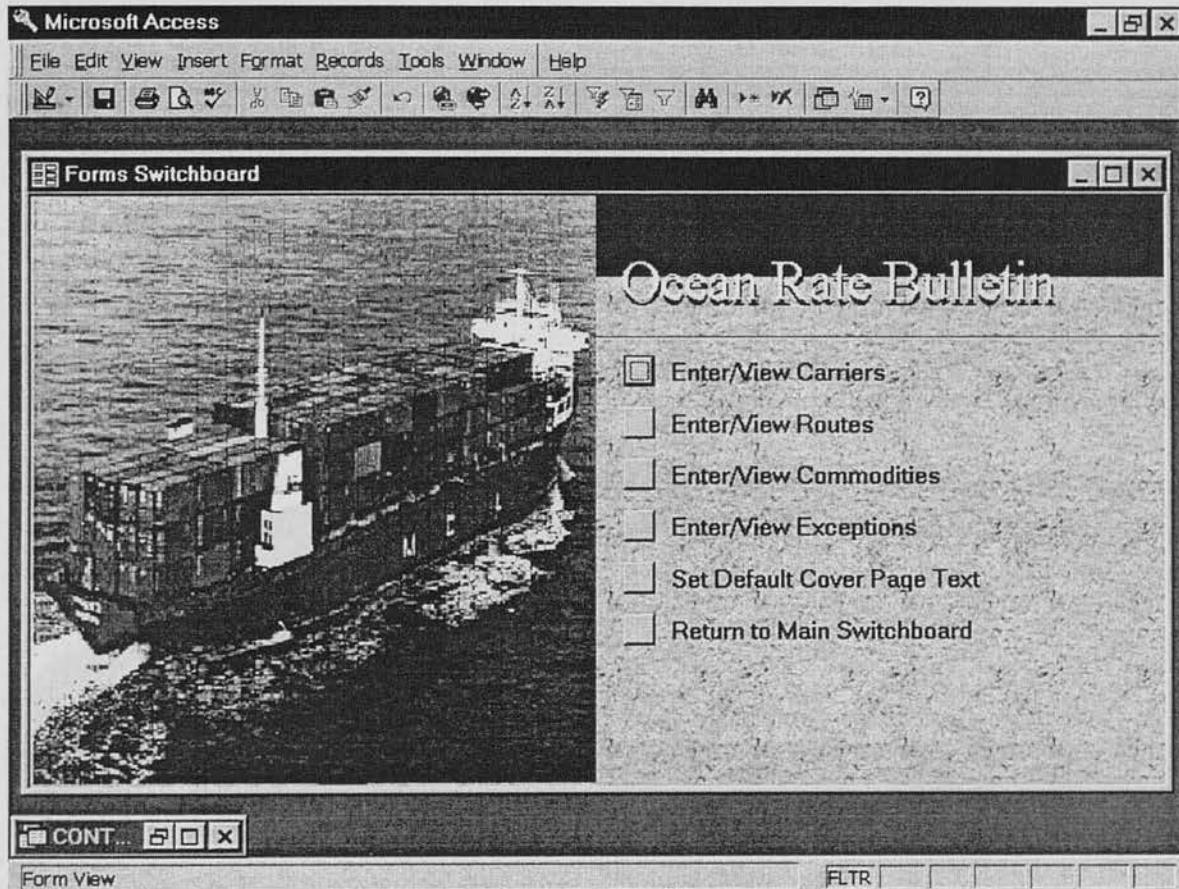
This button will close the Carrier Rate Information form and take you back to the Ocean Rate Bulletin form.

### **Trash Button:**

Allows you to delete the information entered on the current record.

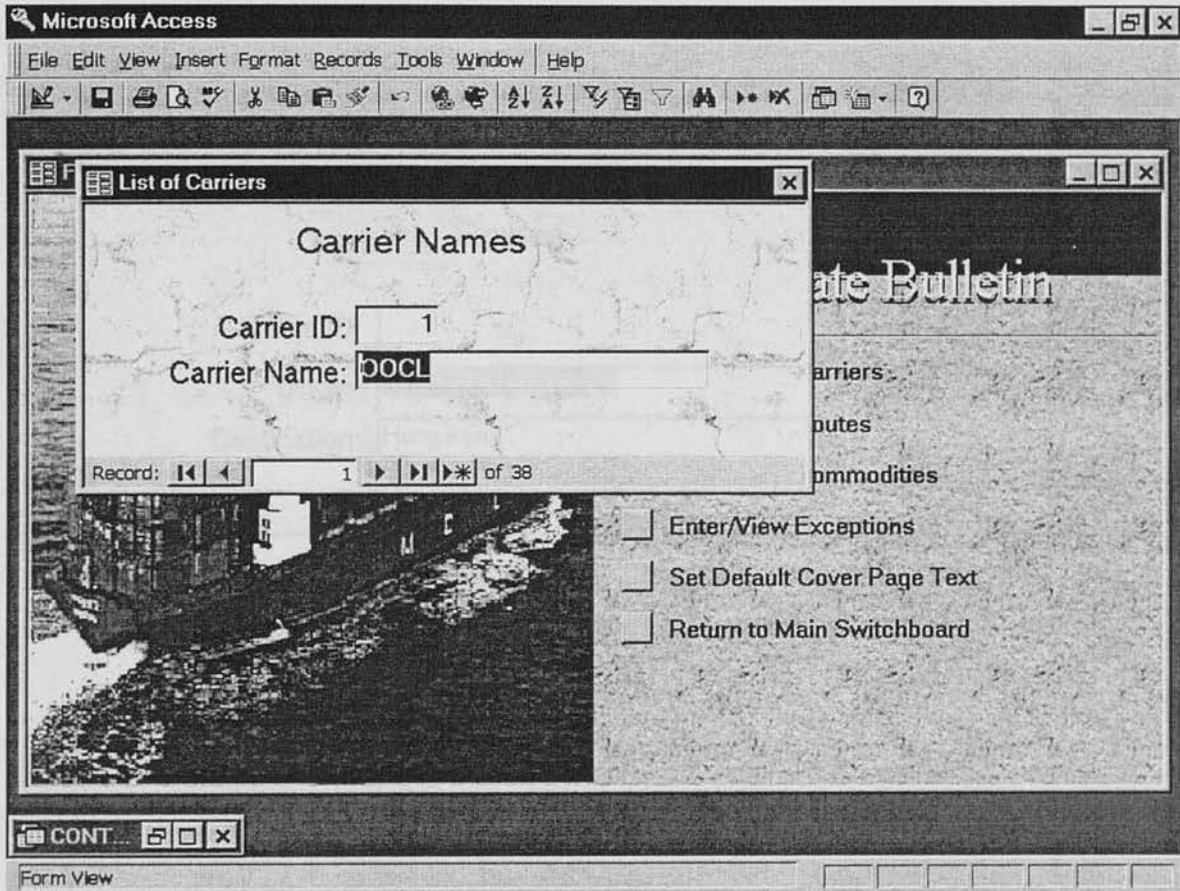
## Enter/View Other Information

Clicking the “*Enter/View Other Information*” command from the Main Switchboard takes you to the Forms Switchboard. This is the area where you can add to your lists of Carriers, Routes, Commodities, Exceptions, and set default cover page text.



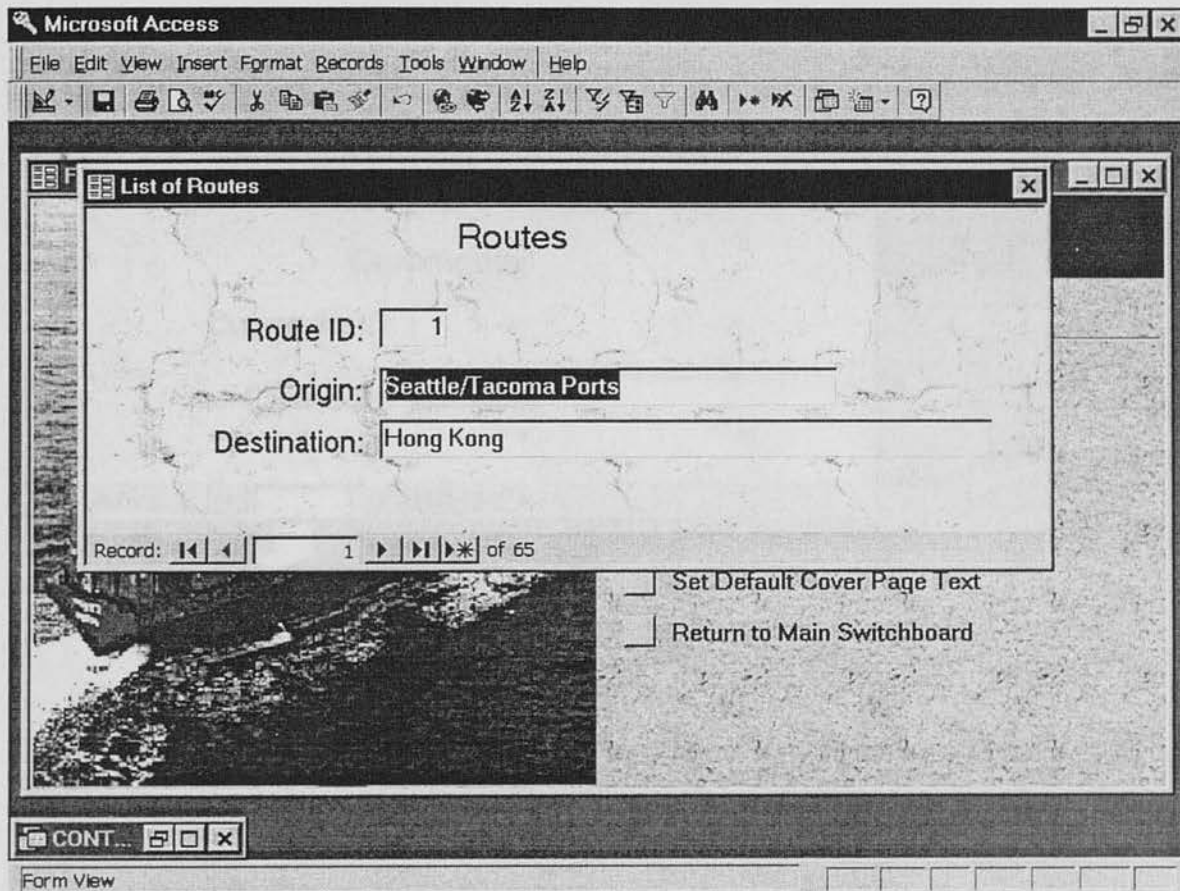
**Enter/View Carriers:**

Opens a form where you can add to the current list of carriers. This list is displayed in the Carrier combo box on the Carrier Rate Information form.



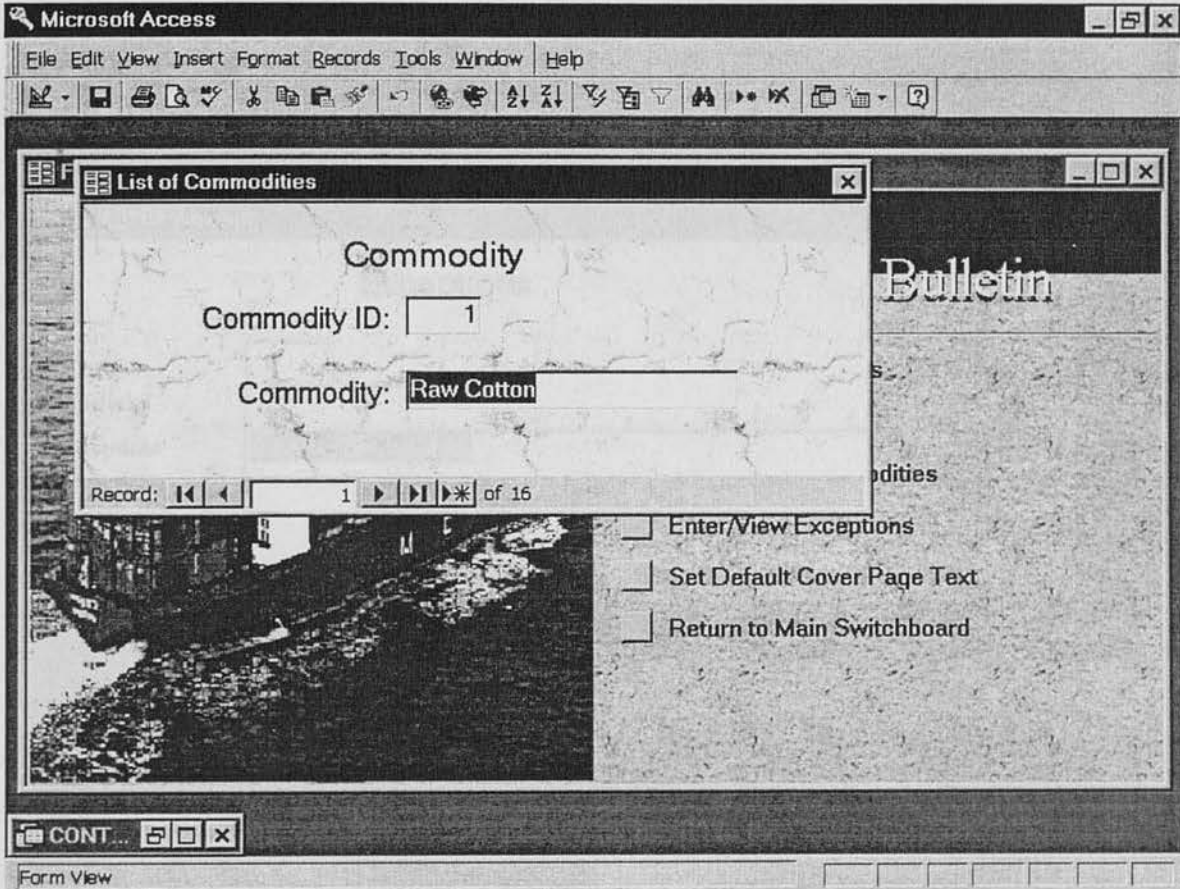
### Enter/View Routes:

Opens a form where you can add to the current list of routes. This list is displayed in the Routes combo box on the Ocean Rate Bulletin data entry form.



### Enter/View Commodities:

Opens a form where you can add to the current list of commodities. This list is displayed in the Commodity combo box on the Ocean Rate Bulletin data entry form.



The asterisk field is a special field that you must fill in correctly in order to have that exception appear in the exceptions column below in the Ocean Rate Information Form. The following are the possible entries into this field:

\* one asterisk should be entered if the exception pertains to a rate that is used in calculating the final container rate. Fields that this exception will be applied to: Ocean Rate, BAF, THC, CAF, CY, CBS Fee, AFB, Ocean R.

\*\* two asterisks should be entered if the exception pertains to an exception to the final Container Rate.

\*\*\* three asterisks should be entered if the exception pertains to an exception to the Transit Time.



## Enter/View Exceptions:

Opens a form where you can add to the current list of exceptions. These exceptions are displayed in the Exception combo boxes found on the Carrier Rate Information form.

The screenshot shows a Microsoft Access window titled "List of Exceptions". The main area is a form titled "Exceptions" with the following fields:

ID	1
Asterisk	*
Exception	Rate is per container

At the bottom of the form, there is a record navigation bar: "Record: 1 of 17".

The asterisk field is a special field that you must fill in correctly in order to have that exception appear in the exception combo boxes in the Carrier Rate Information Form. The following are the possible entries into this field:

- \* one asterisk should be entered if the exception pertains to a rate that is used in calculating the final container rate. Fields that this exception will be applied to:  
Ocean Rate, BAF, THC, CAF, CY, CFS Rec., ARB, Cotton R.
- \*\* two asterisks should be entered if the exception pertains to an exception to the final Container Rate.
- \*\*\* three asterisks should be entered if the exception pertains to an exception to the Transit Time.

## Set Default Cover Page Text:

Opens a form where you can set a particular commodity's default cover page text.

The screenshot shows a Microsoft Access window titled "Default Cover Page Text". The form is in "Form View" and displays the following sections:

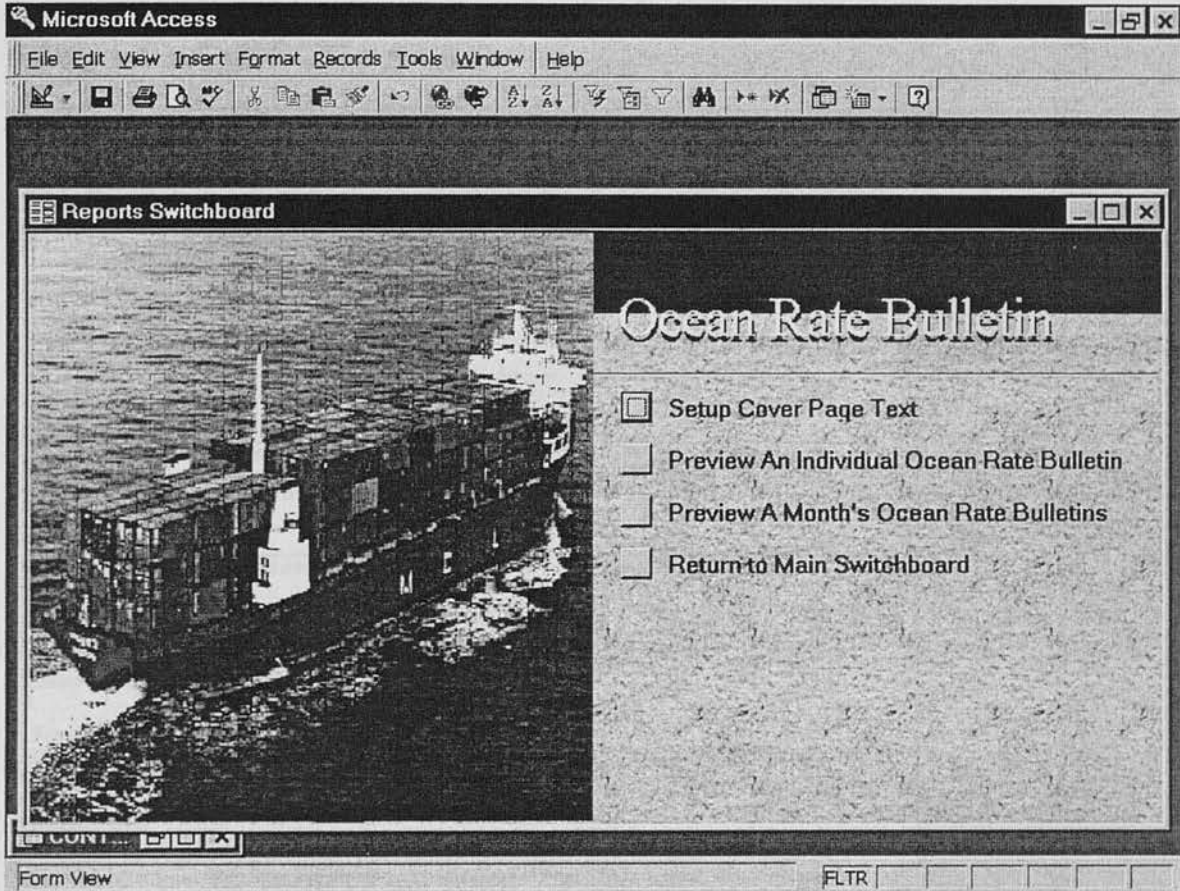
- Select Commodity:** A dropdown menu with "Almond" selected.
- Total TEU/FEU:** A text box containing the text: "The numerator represents the total number of 20-foot equivalent unite (TEU) shipped, by all carriers, during February 1997. The denominator represents the total number of TEU shipped, by all carriers, throughout the 1997 calendar year. Source: Post Import Export Reporting Service (PIERS), Journal of Commerce, February 1997."
- Market Share-Month:** A text box containing the text: "Each carrier's current market share is based on the number of containers shipped during February 1997. Source: PIERS, February 1997."
- Market Share-CY:** A text box containing the text: "Each carrier's market share is based on the total number of containers shipped throughout the 1997 calendar year. Source: PIERS, 1997."
- Transit Time:** A text box containing the text: "Each carrier's transit time is calculated on departure from Oakland, CA unless otherwise noted. Source: The Pacific Shipper, April 7, 1997."
- Ocean Rates:** A text box containing the text: "Ocean rates are applicable for #IssueDate#. Rates are per 20-foot container. Rates are quoted in U.S. dollars and represent container-yard to container-yard shipments. Source: Identified through the DXI on-line rate tariff retrieval system."
- Container Rate:** A text box that is currently empty.

At the bottom of the form, there is a status bar that reads "Record: 14 of 16".

There are 8 sections to an Ocean Freight Rate Bulletin cover page. Changes made to the defaults are stored in a table and used when the user clicks the "Defaults For This Commodity" button when setting up a cover page for a particular Issue Date.

## Preview Rate Reports

The next option from the Main Switchboard is Preview Rate Reports. When you click this button, the following Reports Switchboard form opens up.



Once you have data entered for a table, this is the place to go to print the Ocean Rate Bulletins. Options here include Setup Cover Page Text, Preview An Individual Ocean Rate Bulletin, Preview A Month's Ocean Rate Bulletins

## Setup Cover Page Text:

This option allows you to setup the text printed out on the cover page for the Ocean Freight Rate Bulletin for the selected Commodity, and Issue Date. Initially, you can click the “*Defaults for this commodity*” button to fill in the text boxes with default values for this commodity. One thing to be sure to change will be the dates in the following fields: Total TEU/FEU, Market Share-Month, Market Share-Year, Transit Time, and Ocean Rates.

**Microsoft Access**

File Edit View Insert Format Records Tools Window Help

**Cover Page Text**

Select Commodity:  Select IssueDate:

Select Month/Year:

**Total TEU/FEU:**  
The numerator represents the total number of 20-foot equivalent unite (TEU) shipped, by all carriers, during February 1997. The denominator represents the total number of TEU shipped, by all carriers, throughout the 1997 calendar year. Source: Port Import Export Reporting Service (PIERS), Journal of Commerce, February 1997.

**Market Share-Month**  
Each carrier's current market share is based on the number of containers shipped during February 1997. Source: PIERS, February 1997.

**Market Share-CY:**  
Each carrier's market share is based on the total number of containers shipped throughout the 1997 calendar year. Source: PIERS, 1997.

**Transit Time:**  
Each carrier's transit time is calculated on departure from Oakland, CA unless otherwise noted. Source: The Pacific Shipper, April 7, 1997.

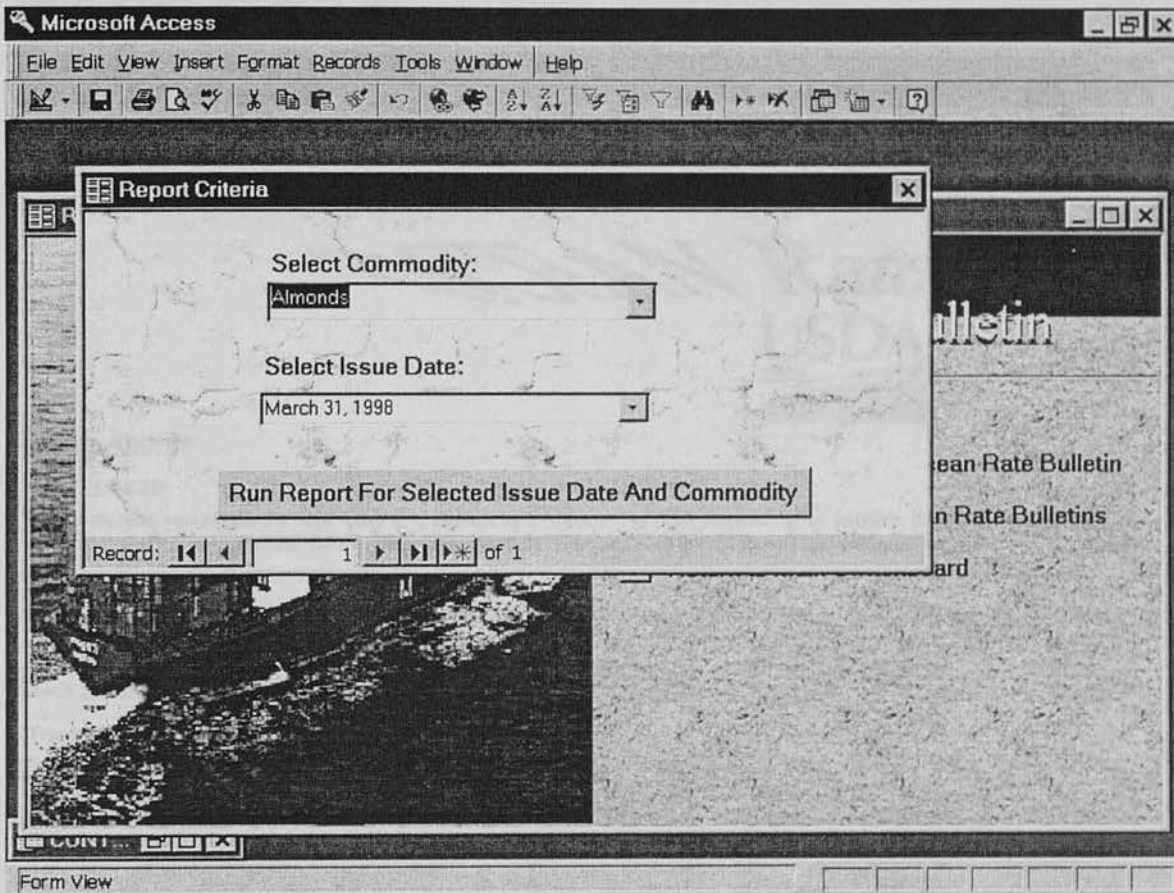
**Ocean Rates:**  
Ocean rates are applicable for April 30, 1997. Rates are per 20-foot container. Rates are quoted in U.S. dollars and represent container-yard to container-yard shipments. Source: Identified through the DXI on-line rate tariff retrieval

Record: 14 of 17

Form View

### Preview An Individual Ocean Rate Bulletin:

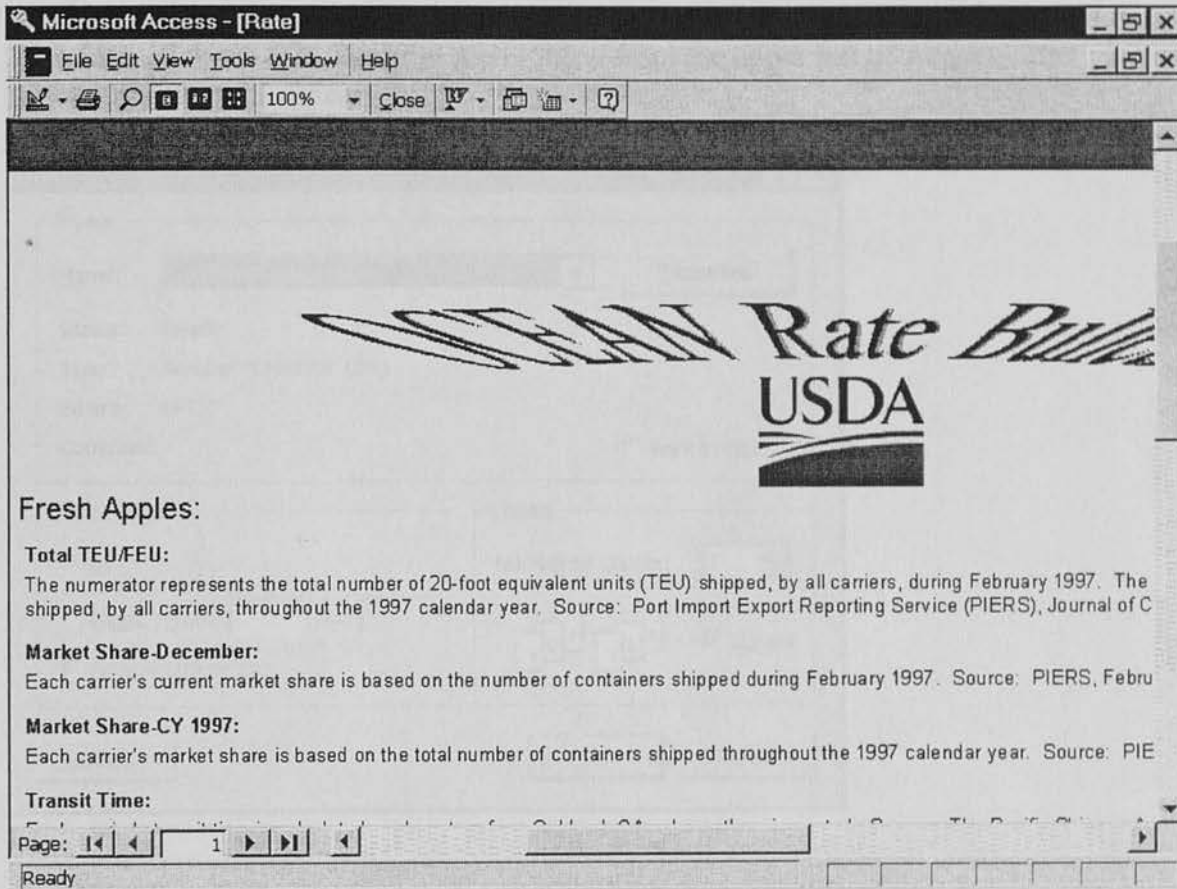
This option allows you to print out an individual Ocean Freight Rate Bulletin report for a commodity for a selected Issue Date.



When you click “*Run Report For Selected Issue Date And Commodity*”, the report preview will be automatically created for you, and appear in a window. The first page that will appear is the cover page. The cover page will not contain any text unless you have previously setup the cover page text as described on page 14 of this manual.

To preview and print an individual Ocean Freight Rate Bulletin for a particular Issue Date, click the “Preview a Single Ocean Rate Bulletin” command button. Here you can select an Issue Date and click the “Run Reports For Selected Issue Date” button. This will create a report that contains all the individual reports for that Issue Date. REMINDER: the cover page for each report will not print any text unless you have previously set it up to do so.

The following is a sample of a report preview of a commodity and issue date that already had the cover page text set. No text will appear if it has not been setup properly.



To print this report to your default printer, click the print command button in the upper left corner.

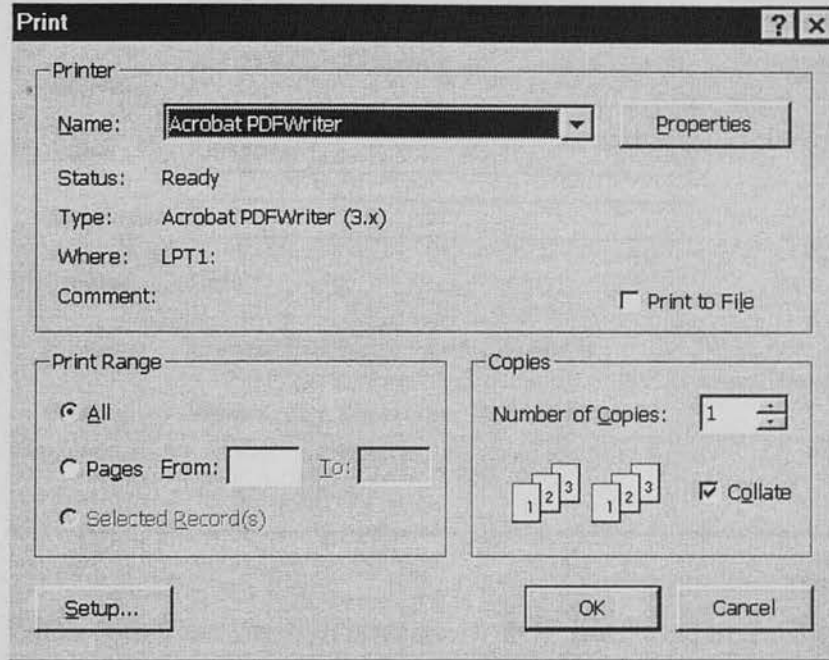
### Preview a Month's Ocean Rate Bulletins:

To preview and print all of the Ocean Freight Rate Bulletin's for a particular Issue Date, click the "Preview a Month's Ocean Rate Bulletins" command button. Here you can select an Issue Date and click the "Run Reports For Selected Issue Date" button. This will create a report that contains all the individual reports for that issue date.

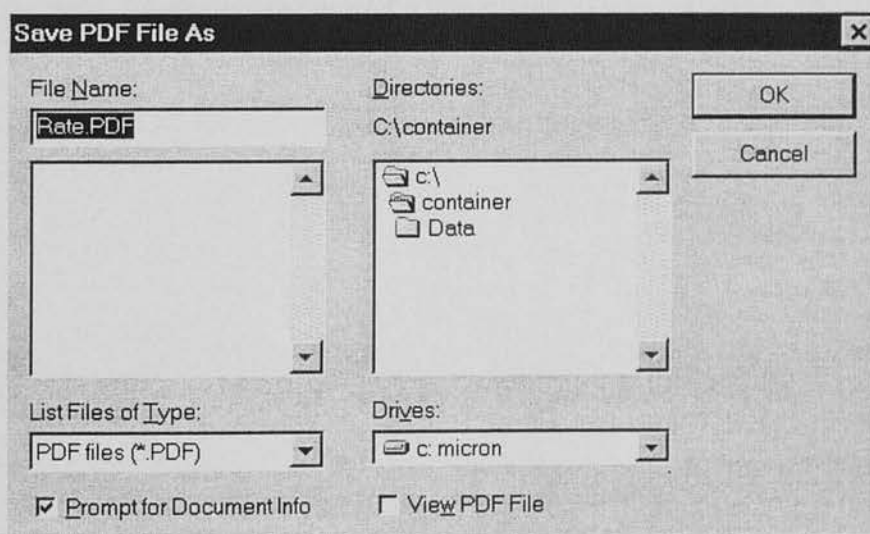
REMINDER, the cover page for each report will not print any text unless you have previously set it up to do so.

### Printing To PDF Files Or To A Printer:

When you are looking at a report, you can either print to your printer, or you may choose to print to Adobe Acrobat Writer. If you would like a report to be able to be placed on a Web Site, click the File, the Print menu items from the upper left of Access. The following form will appear:

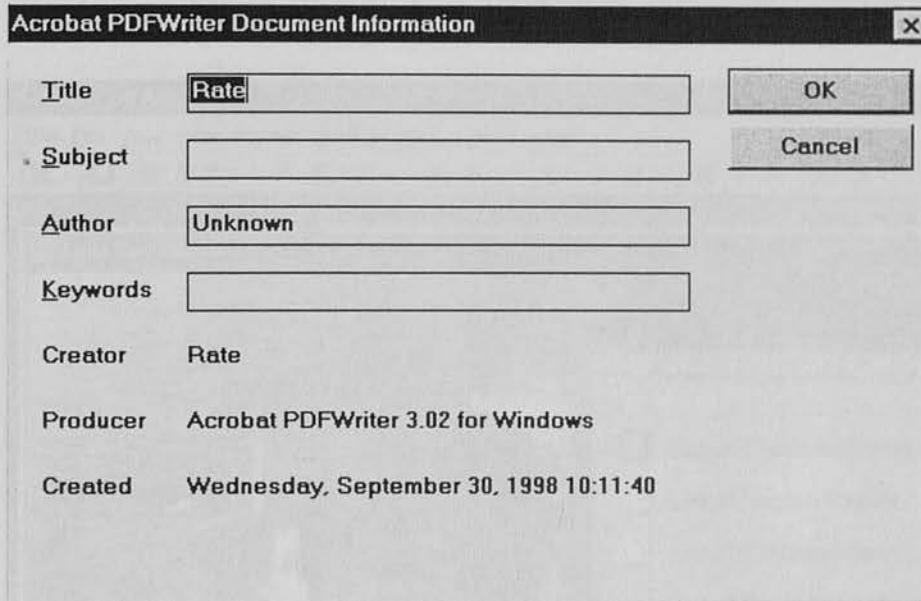


In the printer name combo box, select the **Acrobat PDFWriter** printer. Click OK. The following form will appear and let you save the PDF file to a directory of your choice.



### Next Step Report

Next, this screen will appear. You can enter document information in here that will be stored in the PDF file, or just click OK and leave this information the same.



The image shows a dialog box titled "Acrobat PDFWriter Document Information" with a close button (X) in the top right corner. The dialog contains several fields and buttons:

Title	<input type="text" value="Rate"/>	<input type="button" value="OK"/>
Subject	<input type="text"/>	<input type="button" value="Cancel"/>
Author	<input type="text" value="Unknown"/>	
Keywords	<input type="text"/>	
Creator	Rate	
Producer	Acrobat PDFWriter 3.02 for Windows	
Created	Wednesday, September 30, 1998 10:11:40	

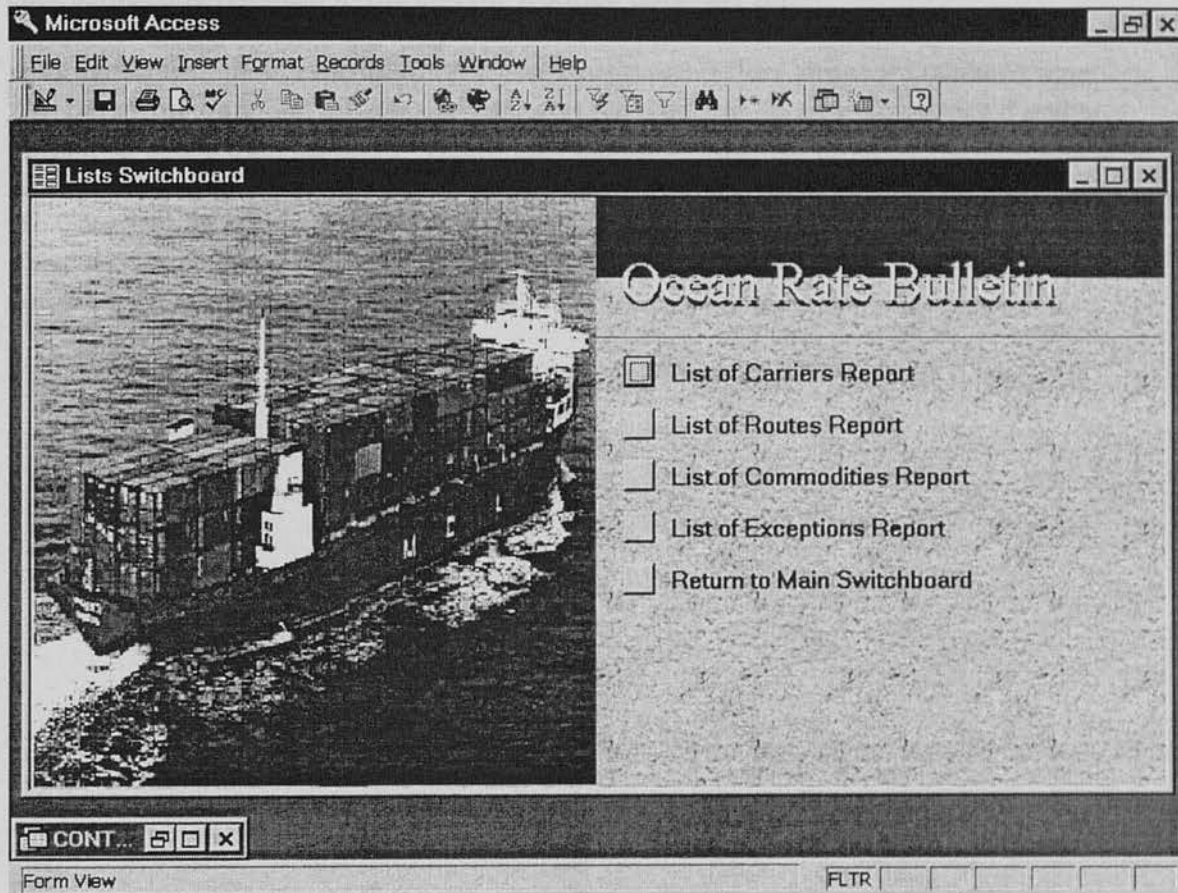
When complete, you will have a new PDF file stored in the directory you selected earlier. Your Web site can point to this file, allowing people on the Internet access to this report. They can either view or print this report directly from their Internet browser.



### Item List Reports:

This section holds several reports on information contained in the database.

Here you can preview lists of Carriers, Routes, Commodities, and Exceptions that are stored in the database.



### 3. Backing up the database:

It is strongly advised keeping at least one extra copy of this database stored in a safe place. Once a week, or once a month you will need to copy the current database over the backup database to keep the backup current. This is just a precautionary measure just in case something happens to the current working database file.

Another feature of Microsoft Access you should use is the Compact Database function. After entering data into an Access database, the data can become fragmented and use more disk space than required. Using the Compact Database function periodically will reduce the size of the database and improve the operating speed of the database. To use the Compact Database method, first open Access and open the container rate database. From the menu click Tools, Database Utilities, Compact Database. This will proceed to compact the database you have opened.

## 4. Troubleshooting

Table Name

Any problems or concerns with the database, please contact Douglas Benson

By phone at:

(701) 231-8388

by fax at:

(701) 231-1945

by e-mail at:

[benson@plains.nodak.edu](mailto:benson@plains.nodak.edu)

Douglas Benson  
The Upper Great Plains Transportation Institute  
NDSU  
IACC Bldg. Rm 430  
P.O. Box 5074  
Fargo, ND 58105

## Ocean Freight Rate Database Tables

Table: Carrier

<b>Properties</b>		Def. Updatable:	True
Date Created:	3/23/98 10:39:18 AM	OrderByOn:	False
Last Updated:	8/19/98 7:43:45 AM		
RecordCount:	38		

<b>Columns</b>	Name	Type	Size
	CarrierID	Number (Long)	4
	CarrierName	Text	50

<b>Table Indexes</b>	Name	Number of Fields
	CarrierID	1
	Primary:	False
	Required:	False
	Unique:	False
	Fields:	CarrierID, Ascending
	CarrierName	1
	Primary:	False
	Required:	False
	Unique:	True
	Fields:	CarrierName, Ascending
	PrimaryKey	1
	Clustered:	False
	Distinct Count:	38
	Foreign:	False
	Ignore Nulls:	False
	Name:	PrimaryKey
	Primary:	True
	Required:	True
	Unique:	True
	Fields:	CarrierID, Ascending

Table: Commodity

**Properties**

Date Created:	3/23/98 11:32:08 AM	Def. Updatable:	True
Last Updated:	8/19/98 7:43:45 AM	OrderByOn:	False
RecordCount:	16		

**Columns**

Name	Type	Size
CommodID	Number (Long)	4
Commodity	Text	50

**Table Indexes**

Name	Number of Fields
Commodity	1
Clustered:	False
Distinct Count:	16
Foreign:	False
Ignore Nulls:	False
Name:	Commodity
Primary:	False
Required:	False
Unique:	True
Fields:	Commodity, Ascending
ID	1
Clustered:	False
Distinct Count:	16
Foreign:	False
Ignore Nulls:	False
Name:	ID
Primary:	False
Required:	False
Unique:	False
Fields:	CommodID, Ascending
PrimaryKey	1
Clustered:	False
Distinct Count:	16
Foreign:	False
Ignore Nulls:	False
Name:	PrimaryKey
Primary:	True
Required:	True
Unique:	True
Fields:	CommodID, Ascending

Table: containerrows

**Properties**

Date Created:	4/1/98 5:05:51 PM	Def. Updatable:	True
Last Updated:	8/19/98 7:43:45 AM	OrderByOn:	False
RecordCount:	20		

**Columns**

Name	Type	Size
ff	Number (Long)	4

AllowZeroLength: False

**Table Indexes**

Name	Number of Fields
PrimaryKey	1
Clustered:	False
Distinct Count:	20
Foreign:	False
Ignore Nulls:	False
Name:	PrimaryKey
Primary:	True
Required:	True
Unique:	True
Fields:	ff, Ascending

Table: CoverPage

**Properties**

Date Created: 8/12/98 8:26:32 PM Def. Updatable: True  
 Last Updated: 8/23/98 1:47:24 PM OrderByOn: True  
 RecordCount: 18

**Columns**

Name	Type	Size
PageID	Number (Long)	4
Commodity	Text	100
IssueDate	Text	50
Month	Text	50
Year	Text	50
TotalTEUFEU	Memo	-
MktShareMnth	Memo	-
MktShareCY	Memo	-
TransTime	Memo	-
ORates	Memo	-
CRates	Memo	-
Definitions	Memo	-
Contact	Memo	-

Table: CoverPageDefault

**Properties**

Date Created:	8/22/98 11:23:13 AM	Def. Updatable:	True
Filter:	((CoverPageDefault.PageID=16))	Last Updated:	8/23/98 11:28:56 AM
OrderByOn:	False	RecordCount:	16

**Columns**

Name	Type	Size
PageID	Number (Long)	4
Commodity	Text	100
Month	Text	50
Year	Number (Long)	4
TotalTEUFEU	Memo	-
MktShareMnth	Memo	-
MktShareCY	Memo	-
TransTime	Memo	-
ORates	Memo	-
CRates	Memo	-
Definitions	Memo	-
Contact	Memo	-

**Table Indexes**

Table: CoverPageDefault

Name	Number of Fields
cmod	2
Clustered:	False
Distinct Count:	16
Foreign:	False
Ignore Nulls:	False
Name:	cmod
Primary:	True
Required:	True
Unique:	True
Fields:	Commodity, Ascending PageID, Ascending



Table: Exceptions

**Properties**

Date Created:	4/24/98 9:19:30 AM	Def. Updatable:	True
Last Updated:	8/19/98 7:43:45 AM	OrderByOn:	False
RecordCount:	17		

**Columns**

Name	Type	Size
ID	Number (Long)	4
Note	Text	50
Exception	Text	200

**Table Indexes**

Name	Number of Fields
ID2	1
Clustered: False Distinct Count: 3 Foreign: False Ignore Nulls: False Name: ID2 Primary: False Required: False Unique: False Fields: Note, Ascending	
PrimaryKey	1
Clustered: False Distinct Count: 17 Foreign: False Ignore Nulls: False Name: PrimaryKey Primary: True Required: True Unique: True Fields: ID, Ascending	

Table: Month

**Properties**

Date Created:	3/30/98 3:05:53 PM	Def. Updatable:	True
Last Updated:	8/19/98 7:43:45 AM	OrderByOn:	False
RecordCount:	12		

**Columns**

Name	Type	Size
MonthID	Number (Long)	4
Month	Text	50

**Table Indexes**

Name	Number of Fields
ID	1
Month	1
PrimaryKey	1
Clustered:	False
Distinct Count:	12
Foreign:	False
Ignore Nulls:	False
Name:	PrimaryKey
Primary:	True
Required:	True
Unique:	True
Fields:	MonthID, Ascending

Table: Rate

**Properties**

Date Created: 3/23/98 10:27:19 AM  
 Last Updated: 9/19/98 10:18:20 AM  
 RecordCount: 8192

Def. Updatable: True  
 OrderByOn: True

**Columns**

Name	Type	Size
ID	Number (Long)	4
RtID	Number (Long)	4
Carrier	Text	50
Monthly FEUs	Number (Long)	4
Market Share	Number (Single)	4
Market Share - CY	Number (Single)	4
Transit Time	Text	50
TransEx	Text	250
Transit Note	Text	50
Ocean Rate	Number (Single)	4
OREx	Text	25
Surcharge Unit	Text	50
BAF	Number (Single)	4
BAFEx	Text	150
CY	Number (Single)	4
CYEx	Text	150
CAF	Number (Single)	4
CAFEx	Text	150
THC	Number (Single)	4
THCEx	Text	150
CFS Rec	Number (Single)	4

Table: Rate

CFSEx	Text	150
ARB	Number (Single)	4
ARBEx	Text	150
Size	Number (Single)	4
ContainerRate	Number (Double)	8
CREx	Text	150
Cotton Receiving	Number (Single)	4
CottonEx	Text	15
Weight	Number (Double)	8

**Table Indexes**

Name	Number of Fields
ID	1
ID1	1
PrimaryKey	1
Clustered:	False
Distinct Count:	8192
Foreign:	False
Ignore Nulls:	False
Name:	PrimaryKey
Primary:	True
Required:	True
Unique:	True
Fields:	ID, Ascending
RtID	1
Clustered:	False
Distinct Count:	1469
Foreign:	False
Ignore Nulls:	False
Name:	RtID
Primary:	False
Required:	False
Unique:	False
Fields:	RtID, Ascending

Table: Route

Properties

Date Created: 3/23/98 10:27:55 AM  
 Last Updated: 8/19/98 7:43:46 AM  
 RecordCount: 65  
 Def. Updatable: True  
 OrderByOn: False

Columns

Columns

Name	Type	Size
RouteID	Number (Long)	4
Origin	Text	50
Destination	Text	50

Table Indexes

Name Number of Fields

Table: Route

ID	1
PrimaryKey	1
Route	2
Clustered:	False
Distinct Count:	65
Foreign:	False
Ignore Nulls:	False
Name:	Route
Primary:	False
Required:	False
Unique:	True
Fields:	Origin, Ascending Destination, Ascending

Table Indexes

Name	Number of Fields
ID	1
Clustered:	False
Distinct Count:	65
Foreign:	False
Ignore Nulls:	False
Name:	Route
Primary:	False
Required:	False
Unique:	True
Fields:	Origin, Ascending Destination, Ascending

Table: RouteTable

**Properties**

Date Created: 4/16/98 9:19:13 AM Def. Updatable: True  
 Last Updated: 8/23/98 11:57:55 AM OrderByOn: True  
 RecordCount: 1469

**Columns**

Name	Type	Size
RtID	Number (Long)	4
IssueDate	Text	50
Commodity	Text	50
Route	Text	100
Month	Text	50
Year	Text	50
MonthlyFEUs	Text	50
AnnualFEUs	Text	50
NotesText	Memo	-
Exception1	Text	100
Exception2	Text	100
Exception3	Text	100
Exception4	Text	100
Exception5	Text	100

**Table Indexes**

Name	Number of Fields
PrimaryKey	1
Clustered:	False
Distinct Count:	1469
Foreign:	False
Ignore Nulls:	False
Name:	PrimaryKey
Primary:	True
Required:	True
Unique:	True
Fields:	RtID, Ascending
TableIndex	5
Clustered:	False
Distinct Count:	1469
Foreign:	False
Ignore Nulls:	False
Name:	TableIndex
Primary:	False
Required:	False
Unique:	True
Fields:	IssueDate, Ascending Commodity, Ascending Route, Ascending Month, Ascending Year, Ascending

Table: Switchboard Items

**Properties**

Date Created:	3/23/98 11:00:02 AM	Def. Updatable:	True
FilterOn:	False	Last Updated:	8/19/98 7:43:46 AM
OrderByOn:	False	RecordCount:	24

**Columns**

Name	Type	Size
SwitchboardID	Number (Long)	4
ItemNumber	Number (Integer)	2
ItemText	Text	255
Command	Number (Integer)	2
Argument	Text	50

**Table Indexes**

Name	Number of Fields
PrimaryKey	2
Clustering:	False
Distinct Count:	24
Foreign:	False
Ignore Nulls:	False
Name:	PrimaryKey
Primary:	True
Required:	True
Unique:	True
Fields:	SwitchboardID, Ascending ItemNumber, Ascending

Table: Type

**Properties**

Date Created:	3/23/98 4:44:06 PM	Def. Updatable:	True
Last Updated:	8/19/98 7:43:46 AM	OrderByOn:	False
RecordCount:	3		

**Columns**

Name	Type	Size
TypeID	Number (Long)	4
Type	Text	50

**Table Indexes**

Name	Number of Fields
ID	1
PrimaryKey	1
Clustered:	False
Distinct Count:	3
Foreign:	False
Ignore Nulls:	False
Name:	PrimaryKey
Primary:	True
Required:	True
Unique:	True
Fields:	TypeID, Ascending
Type	1
Clustered:	False
Distinct Count:	3
Foreign:	False
Ignore Nulls:	False
Name:	Type
Primary:	False
Required:	False
Unique:	True
Fields:	Type, Ascending



Table: Year

Created: 4/2/98 9:27:27 AM  
 Query: A:\Database

Database: January 22, 1998  
 Page: 1

**Properties**

Date Created: 4/2/98 9:27:27 AM Def. Updatable: True  
 Last Updated: 8/19/98 7:43:46 AM OrderByOn: False  
 RecordCount: 25

**Columns**

Name	Type	Size
YearID	Number (Long)	4
Year	Text	50

**Table Indexes**

Name	Number of Fields
YearID	1

## Main Queries

C:\New\_rate.mdb  
Query: AddExceptions

Saturday, January 02, 1999  
Page: 1

### Properties

Date Created:	7/19/98 8:27:31 PM	Def. Updatable:	True
Last Updated:	8/23/98 5:42:48 PM	MaxRecords:	0
ODBCTimeout:	60	Record Locks:	No Locks
Records Affected:	0	ReturnsRecords:	True
Type:	Select		

### SQL

```
SELECT RouteTable.IssueDate, RouteTable.Commodity, RouteTable.Route, RouteTable.Month,
RouteTable.Year, RouteTable.MonthlyFEUs, RouteTable.AnnualFEUs, Rate.Carrier, Rate.[Market Share],
Rate.[Market Share - CY], Rate.TransEx, Rate.OREx, Rate.BAFEx, Rate.CYEx, Rate.CAFEx,
Rate.THCEX, Rate.CFSEx, Rate.ARBEx, Rate.CREx, Rate.CottonEx, Switch(Rate.[Transit
Time]=-1,"",True,Switch(Rate.[Transit Time]="none","none",True,Switch(Rate.TransEx > "2" AND
Rate.TransEx < "13",(Rate.[Transit Time] + " Days"), True, Rate.[Transit Time]+ " Days"))) AS TTime,
Switch(Rate.[Ocean Rate] = -1, "", True, Switch(Rate.[Ocean Rate] = 0, "AI", True, Switch(Rate.OREx =
"1", Cstr(Rate.[Ocean Rate]),True, cstr(Rate.[Ocean Rate]))) AS ORT, Switch(Rate.[Cotton Receiving] =
-1, "", True, Switch(Rate.[Cotton Receiving] = 0, "AI", True, Switch(Rate.CottonEx = "1", Cstr(Rate.[Cotton
Receiving]),True, cstr(Rate.[Cotton Receiving]))) AS CRT, Switch(Rate.BAF = -1, "",
True,Switch(Rate.BAF=0, "AI", True, Switch(Rate.BAFEX = "1", cstr(Rate.BAF),True, CStr(Rate.BAF)))) AS
BF, Switch(Rate.CY=-1,"",True,Switch(Rate.CY = 0, "AI", True,
Switch(Rate.CYEx="1",Cstr(Rate.CY),True,CStr(Rate.CY)))) AS C, Switch(Rate.CAF = -1, "",
True,Switch(Rate.CAF = 0, "AI", True, Switch(Rate.CAFEx="1",Cstr(Rate.CAF), True, CStr(Rate.CAF))))
AS CA,
Switch(Rate.THCEX=-1,"",True,Switch(Rate.THCEX=0,"AI",True,Switch(Rate.THCEX="1",CStr(Rate.THCEX), True,
CStr(Rate.THCEX)))) AS T, Switch(Rate.[CFS Rec] = -1,"", True,Switch(Rate.[CFS
Rec]=0,"AI",True,Switch(Rate.CFSEx = "1", CStr(Rate.[CFS Rec]),True, CStr(Rate.[CFS Rec]))) AS CS,
Switch(Rate.ARB = -1, "", True,Switch(Rate.ARB = 0, "AI", True,
Switch(Rate.ARBEx="1",CStr(Rate.ARB),True, CStr(Rate.ARB)))) AS AB,
Switch(Rate.Size=-1,"",True,Switch(Rate.Size>100,cstr(Rate.Size) & "
pkgs.",True,Switch(Rate.Size<101,cstr(Rate.Size) & " KT",True,cstr(Rate.Size)))) AS SZ,
Switch(Rate.[ContainerRate]=-1, "", True,Switch(Rate.CREx="2",CStr(Rate.ContainerRate),True,
```

**Properties**

Date Created:	8/2/98 11:55:53 AM	Def. Updatable:	True
Last Updated:	9/27/98 7:33:53 PM	MaxRecords:	0
ODBCTimeout:	60	OrderByOn:	False
Record Locks:	No Locks	Records Affected:	0
RecordsetType:	All Records	ReturnsRecords:	True
Type:	Select		

**SQL**

```
SELECT Exceptions.Exception, QueryEx.Route, QueryEx.Commodity, Exceptions.ID  
FROM Exceptions INNER JOIN QueryEx ON cstr(Exceptions.ID) = QueryEx.Exception1;
```

**Properties**

Date Created:	9/23/98 9:52:52 PM	Def. Updatable:	True
Last Updated:	9/23/98 9:52:52 PM	MaxRecords:	0
ODBCTimeout:	60	Record Locks:	No Locks
Records Affected:	0	ReturnsRecords:	True
Type:	Select		

**SQL**

```
SELECT Exceptions.Exception, QueryEx3.Route, QueryEx3.Commodity, Exceptions.ID  
FROM Exceptions INNER JOIN QueryEx3 ON cstr(Exceptions.ID) = QueryEx3.Exception1;
```

**Properties**

Date Created:	11/2/98 4:14:48 PM	Def. Updatable:	True
Last Updated:	11/2/98 4:14:48 PM	MaxRecords:	0
MaxRecords:	0	ODBCTimeout:	60
Record Locks:	No Locks	Records Affected:	0
ReturnsRecords:	True	Type:	Select

**SQL**

```
SELECT IssueDate, Commodity, Route, Month, Year, MonthlyFEUs, AnnualFEUs, Carrier, [Market  
Share], [Market Share - CY], TTIME, ORT, BF, C, CA, T, CS, AB, CRT, SZ, CR, TransEx, OREx, BAFEx,  
CYEx, CAFEx, THCEx, CFSEx, ARBEx, CottonEx, CREx  
FROM AddExceptions  
WHERE AddExceptions.Commodity = 'Fresh Apples' AND AddExceptions.IssueDate = 'January 15, 1997'
```

