VzCost Technical Documentation:

Switch Container Program

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1.0   Getting Started

An account, login ID and password will be established for every user. Both the login and password are case sensitive.

The following software will be required.

- Oracle 8 Client

- Acrobat Reader Distiller

- BDE

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1.   Double click on the "SETUPEX.EXE" file and follow the instructions.

2.   Double click on "SWCONTSETUP.EXE" to access the Switch Container Program.

2.0   Overview

The Switch Container Program is an optional method of converting investments into Investment Elements (IE). The output is in a format suitable for upload into VZCost. Using the mapping process in the Container Program, allows the user a means of documenting the investments used to create IE(s).

3.0   Navigating the Screens

3.1   Main Screen

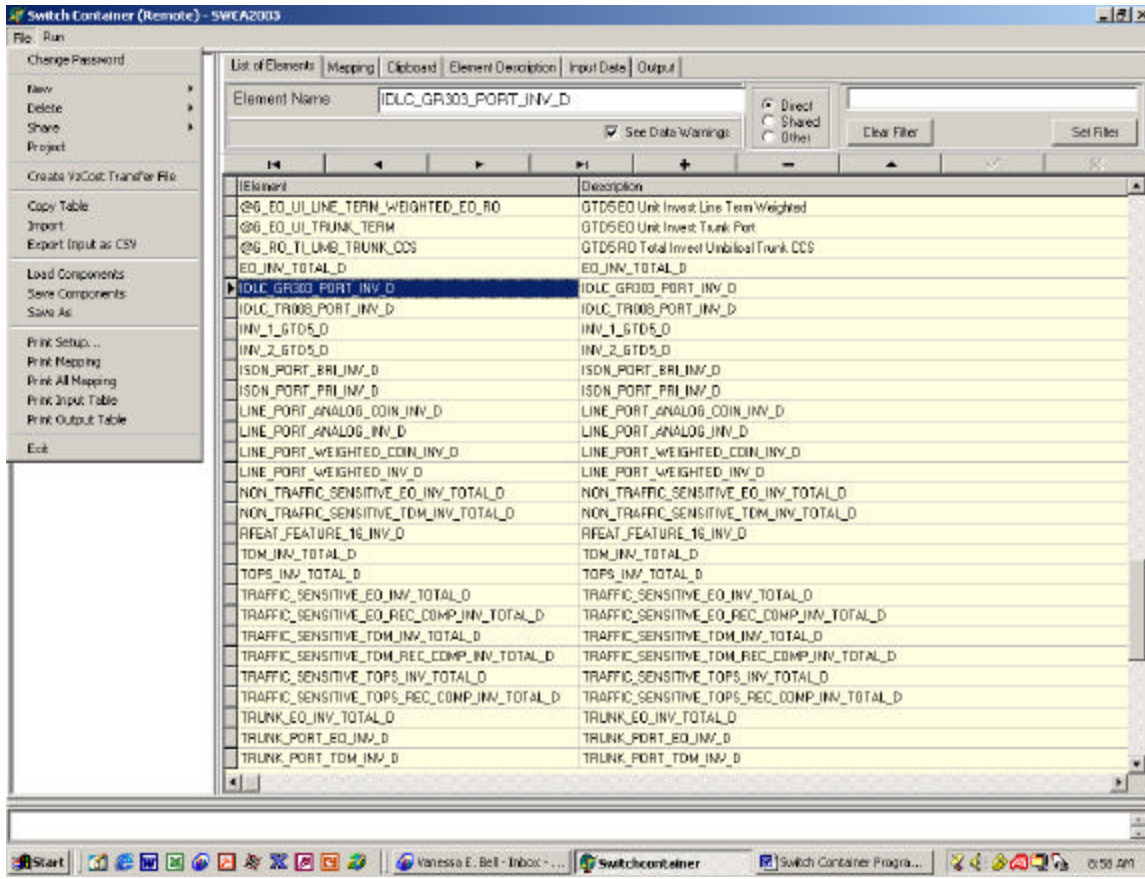Below is a picture of the main screen.

Title Bar   **Menu Bar**

Toolbar
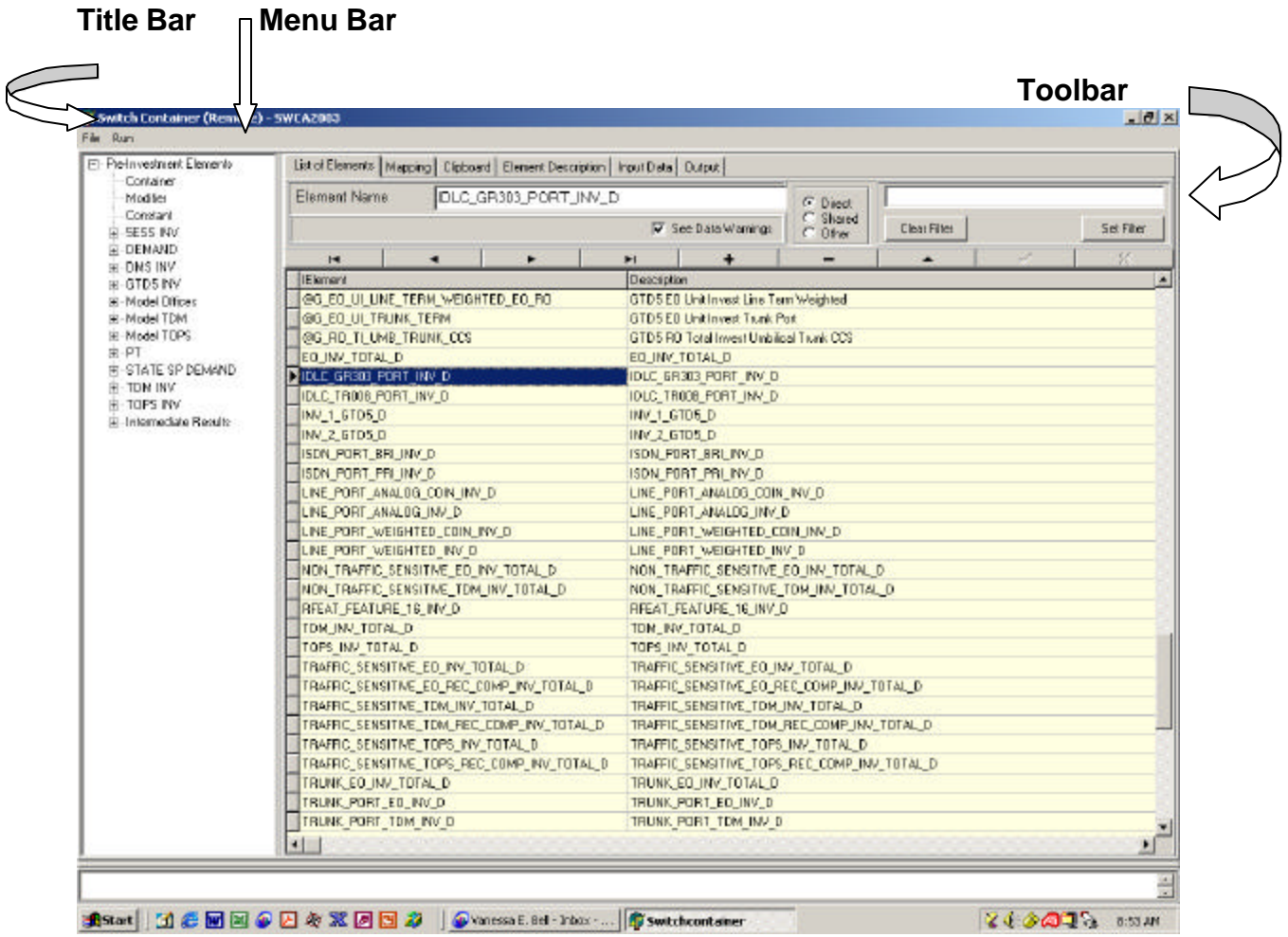
The title bar lists the program name and the name of the last project retrieved.

The menu bar provides two functions for the user: File function and Run function.

3.2 The File Options

3.2.1 Change Password

A new user is assigned a password to access the program. If you want to change your password, select this option.

3.2.2 New

Three (3) tables are required to establish a project: Element Mapping Table, Value Table and the Investment Element Table. This option will create these tables without data (empty tables to be populated).

Once the table is created, it can be used to create tables containing data when the Copy option (section 3.2.7 of this guide) and/or the Import option (section 3.2.8 of this guide) is selected.

When the New option is selected, another pull down screen will appear.
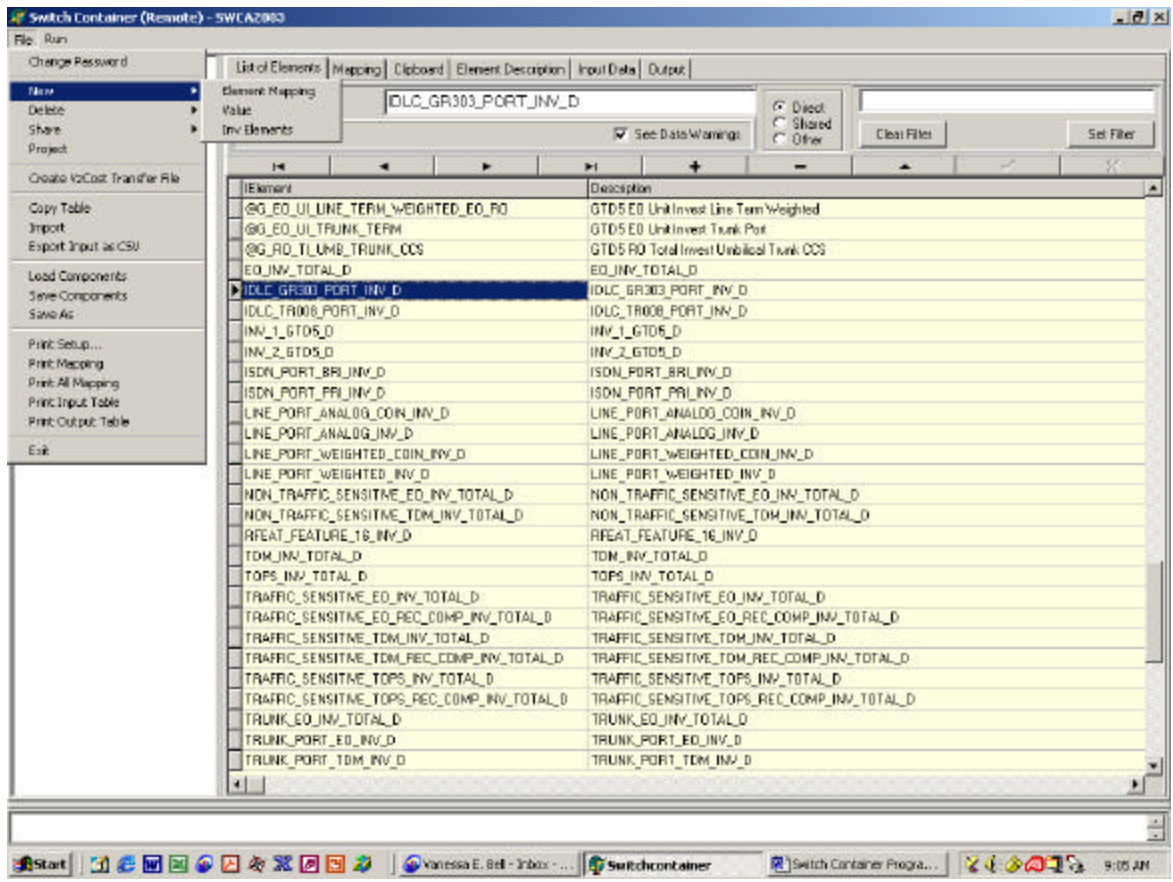
- Element Mapping – This option creates the List of Elements table. The "New Element Mapping Table " screen will appear. Enter a name, in the cell located in the lower section of the screen and click the create button. To exit the screen, click cancel button. The ability to create element mapping is also established at this time.

  To create the Element Mapping Table containing elements and mapping from a previous project, use the Copy Table option on the File menu (See section 3.2.7 of this guide).

  The Element Mapping Table can be viewed in two parts. Click the *Element Name Tab* to view the elements and descriptions. Click the *Mapping Tab* to view the element mapping.

  Mapping can be done in a two-step process: first intermediate and final mapping for an IE. Essentially, the first intermediate mapping(s) is used to create the final mapping. First intermediate mappings will appear in the Tree View, identified with an "@" at the beginning of the IE name

- Value – This option creates the Input Data Table. The "New Value Table" screen will appear. Enter a name in the cell located in the lower section of the screen and then click the create button. To exit the screen, click cancel button.

  To create this table containing input data, consider the Copy option on the File menu (See section 3.2.7) or the Import option on the File menu (See section 3.2.8 of this guide).

  The Value Table can be viewed by clicking the *Input Data Tab*.

- Inv Elements – Every project requires an output table. To create the Output Table, select this option. The "New Investment Element Table" screen will appear. Enter a name in the cell located in the lower section of the screen and then click the create button. To exit the screen, click cancel button.

  The mapping results will be placed in this table, once the Process option on the Run menu is selected (See section 3.3.2 of this guide).

  This table can be viewed by selecting the *Output Tab*.

3.2.3   Delete
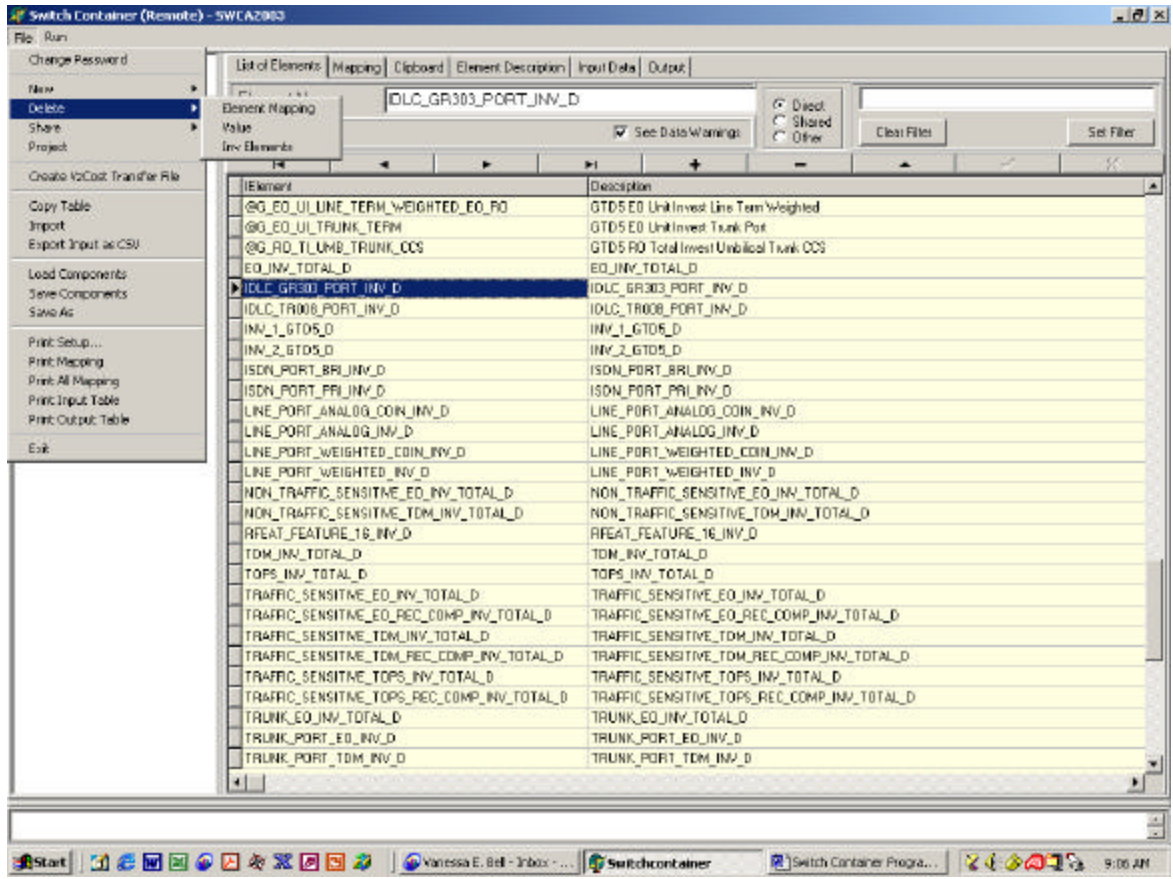
To delete an Element Mapping Table, Value Table and/or Investment Element Table, select this option.

- Element Mapping –The "Delete Element Mapping Table " screen will appear. Select the table to be deleted and click the delete button. To exit the screen, click cancel button.

- Value – The "Delete Value Table" screen will appear. Select the table to be deleted then click the delete button. To exit the screen, click cancel button.

- Inv Elements – The "Delete Investment Elements Table" screen will appear. Select the table to be deleted then click the delete button. To exit the screen, click cancel button.

3.2.4   Share
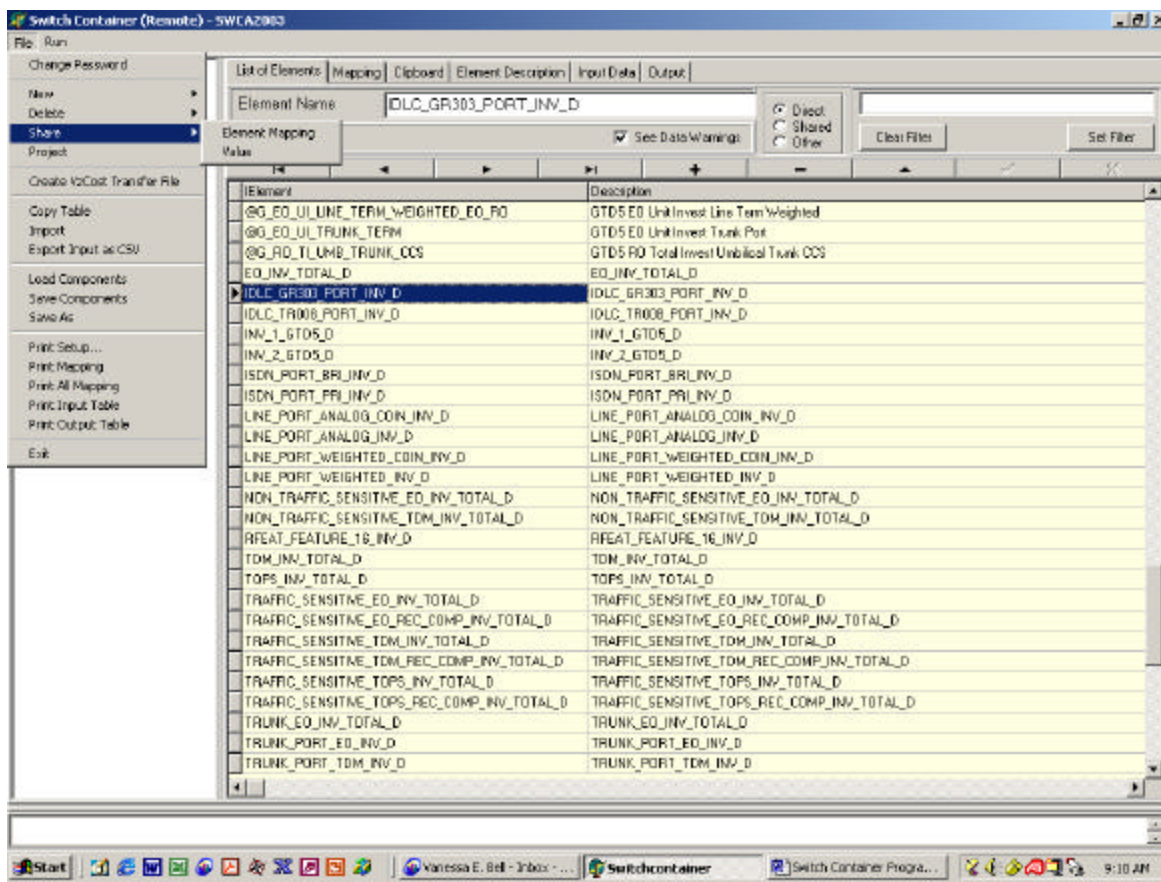
A user can share or revoke the ability to share tables with other users, when this option is selected. Only the table(s) currently in use will be shared.

- Element Mapping - The "Table Access" screen will appear. The name of the table will appear on the right of the screen name. Select the name of the user then click the appropriate button: grant or revoke. To exit the screen, click the exit button.

- Value Table - The "Table Access" screen will appear. The name of the table will appear on the right of the screen name. Select the name of the user then click the appropriate button: grant or revoke. To exit the screen, click the exit button.

The recipient of the shared table(s) can read or copy the table(s); they cannot change table entries.

3.2.5   Project
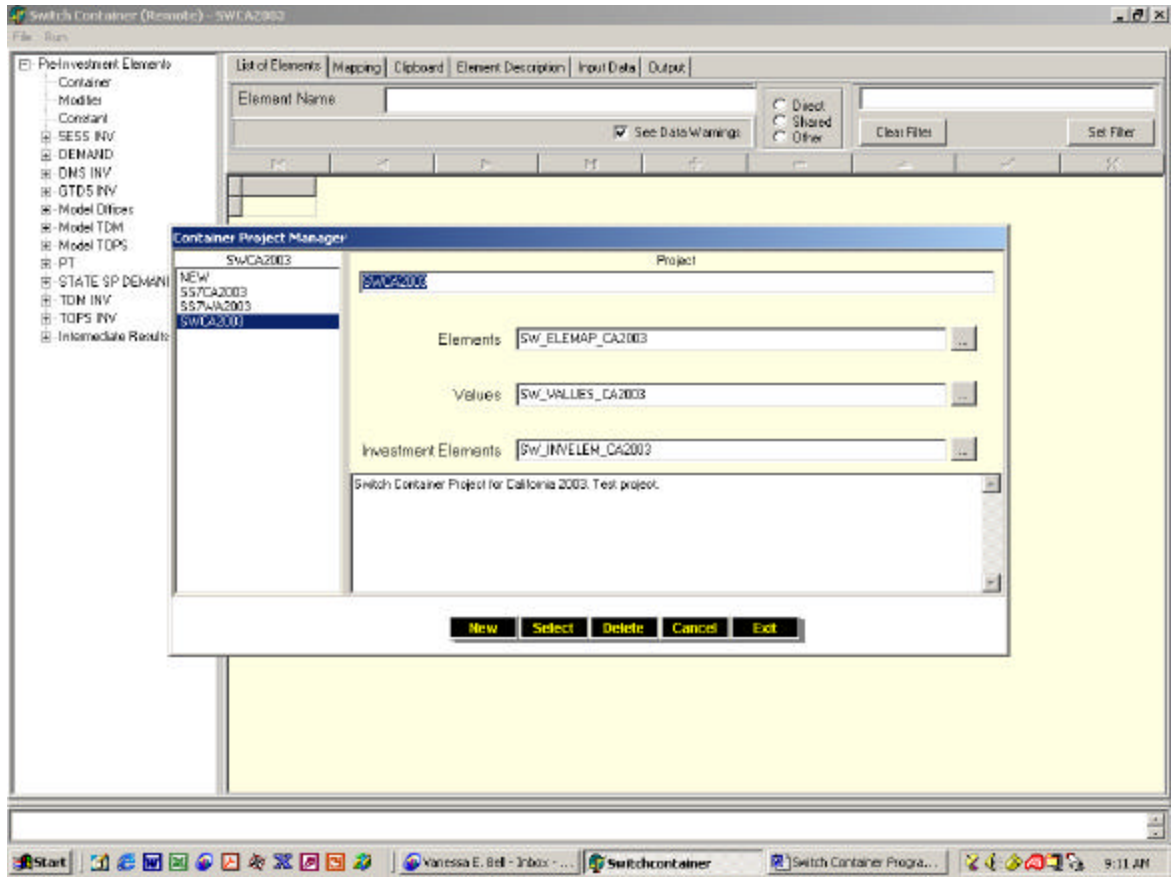
Once all the table have been created or identified (i.e. Element Mapping table, Value table and Investment Element table), a project can be established. This option will define the project: project name, which tables will be used to create this project and the project description. When the "Confirm" screen appears, click the okay button to save project changes to the server.

The next screen to appear is the "Container Project Manager " screen. The screen buttons are as follows.

- • New -To establish a new project, click on the new button. The default project name, New, will appear in the first cell. Rename the project by entering another project name. In the next cells enter the name of the Elements Table, Values Table and the Investment Elements Table or a list of available tables will appear when you click on the gray cells to the right of the Elements, Values and Investment Elements. Select the tables required. In the bottom section of this screen, enter a project description. Click the select button.

To save the entries and exit the screen, click the exit button.

- Select - The last project accessed will be listed in the project cell. If another project is required, click on the project name listed on the Tree View located on the left of the "Container Project Manager" screen. Click this button to exit the screen and return to the main screen. The tables for the project selected will appear.

- Delete - To delete a project, select the project then click this button.

- Cancel - If tables assigned to a project were changed and the user will not want to save these table changes, select this button. The main screen will appear with the original tables associated with the project.

- Exit - Project changes will be saved and the user will be returned to the main screen, when this button is selected.

3.2.6   Create VzCost Transfer File

To save the output file into a VzCost Transfer File, select this option. A "Save" screen will appear. Select a folder and enter a file name.

3.2.7   Copy Table

The Copy Table option creates a new table and copies the data from an existing table to this new table. The existing table is listed in the Source cell on the "Copy Table" screen and the new table name is entered in the Destination cell on the "Copy Table" screen

Source tables are Element Mapping, Value and Investment Elements tables. When the Copy Table option is selected, the "Copy Table" screen appears. Enter the source table in Source cell or click the select button below the Source cell. When using the select button, a list of available tables will appear. Select the appropriate table. Enter the destination then click the copy button.

The "Information" screen appears, stating the table has been copied. Click okay button to return to the "Copy Table" screen.

To exit this option, click the exit button.

3.2.8   Import

The input data can be imported to SS7 Container Program.

To import a file, select the **Input Tab** then select Import from the File menu. After selecting this option, the "Open" screen will appear. Locate the file to import. Click the open button.

For the Input file format, see Section five (5) of this guide.

3.2.9   Export Input as CSV

Changes to the Input file can be made within the SS7 Container Program; however, those changes are not automatically saved on the original Input file. This option allows the user to save the program Input file, as a CSV file, to another source.

3.2.10   Load Components

During the mapping process, the clipboard may be used to retain containers, which will be used to develop several IE(s). The user can load these saved mapping components from another source such as "C" drive, using this option.

When this option is selected, the "Open" screen will appear. Select the source of the mapping components and click the open button.

3.2.11   Save Components

If mapping components located on the clipboard are to be used for later projects, these components can be saved to another source using this option. Select this option and the "Save As" screen will appear. Select where the mapping will be saved then click the save button.

3.2.12   Save As

Select this option to save the Component file. Enter a file name and select where the file is to be saved.

3.2.13   3.2.13 Print Setup

This option will allow the user to select various printer options. After selecting ***Print Setup***, the "Print Setup" screen will appear. Select the appropriate options on this screen then click the okay button.

3.2.14   Print Mapping

To print the mapping and equations as they appear on the mapping screen, select this option. The mapping will print automatically to the printer designated on the "Print Setup" screen. Default is the printer connected to the user's PC.

3.2.15   Print All Mapping

To print all mapping for a project, select this option.

3.2.16   Print Input Table

The Input Table can be viewed via the Input Tab. Use this option to print the table.

3.2.17   Print Output Table

The Output Table can be viewed via the **Output Tab**. Use this option to print the table.
When this option is selected, the "Report Viewer" screen will appear.

3.2.18   Exit

To exit or end the Container Program, select this option. The "Confirm" screen will
appear. Click "OK" to save project changes to the server and exit the program.

3.3   The Run Options
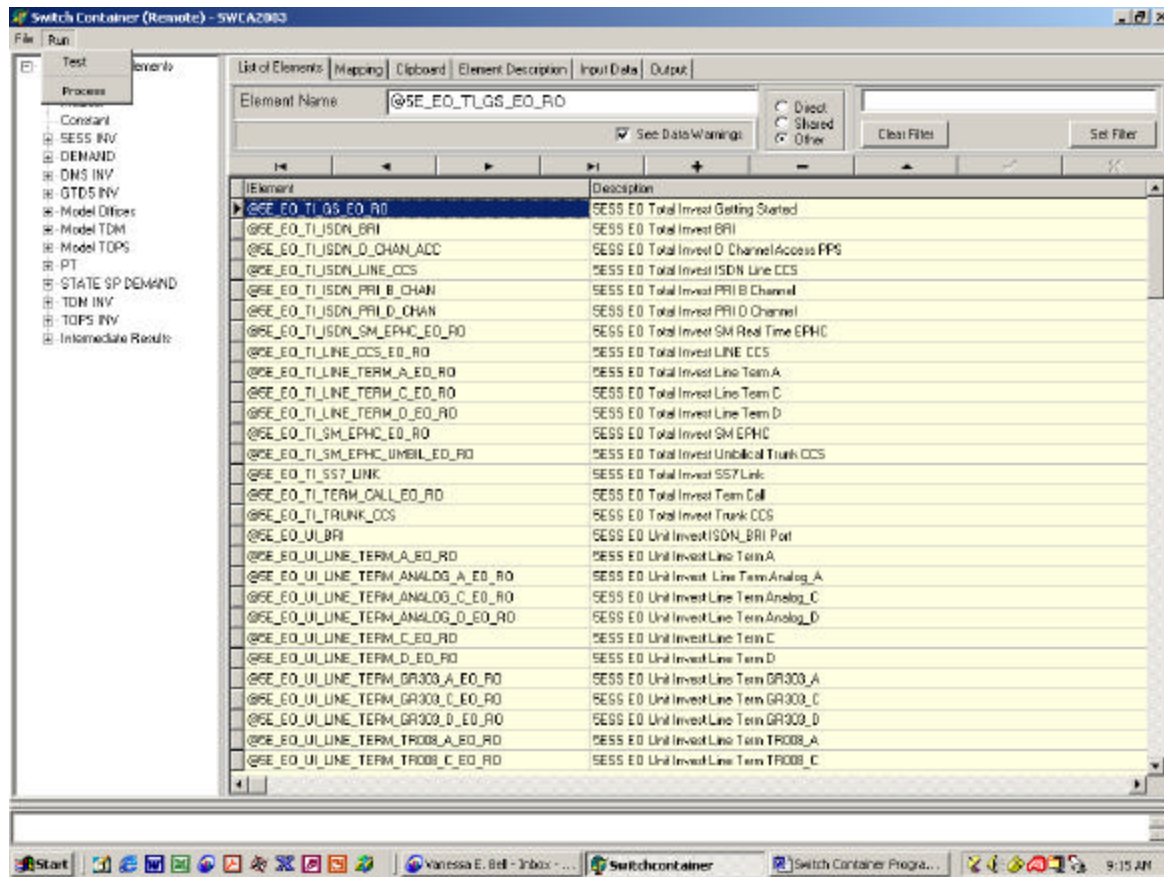
3.3.1   Test

Once mapping is complete, select this option to review the results. The content and
results of each container and a summary of the results is listed at the bottom of the screen.
Move the horizontal bar to reduce or increase that section of the screen. If the mapping is
correct, click the *Save Mapping Tab.*

If changes are required, complete changes, click the *Save Mapping* speed button then
select Test again.

3.3.2 Process

Once the mapping is complete for all IE(s), select the Process option. This option creates the output file in the format of an input file to VZCOST. To view these results, select the *Output Tab*.

3.4 The Tree View

This screen is located to the far left section of the program screen. Here input data file contents (also referred to as pre-elements), the container, the modifier and the constant objects are listed.
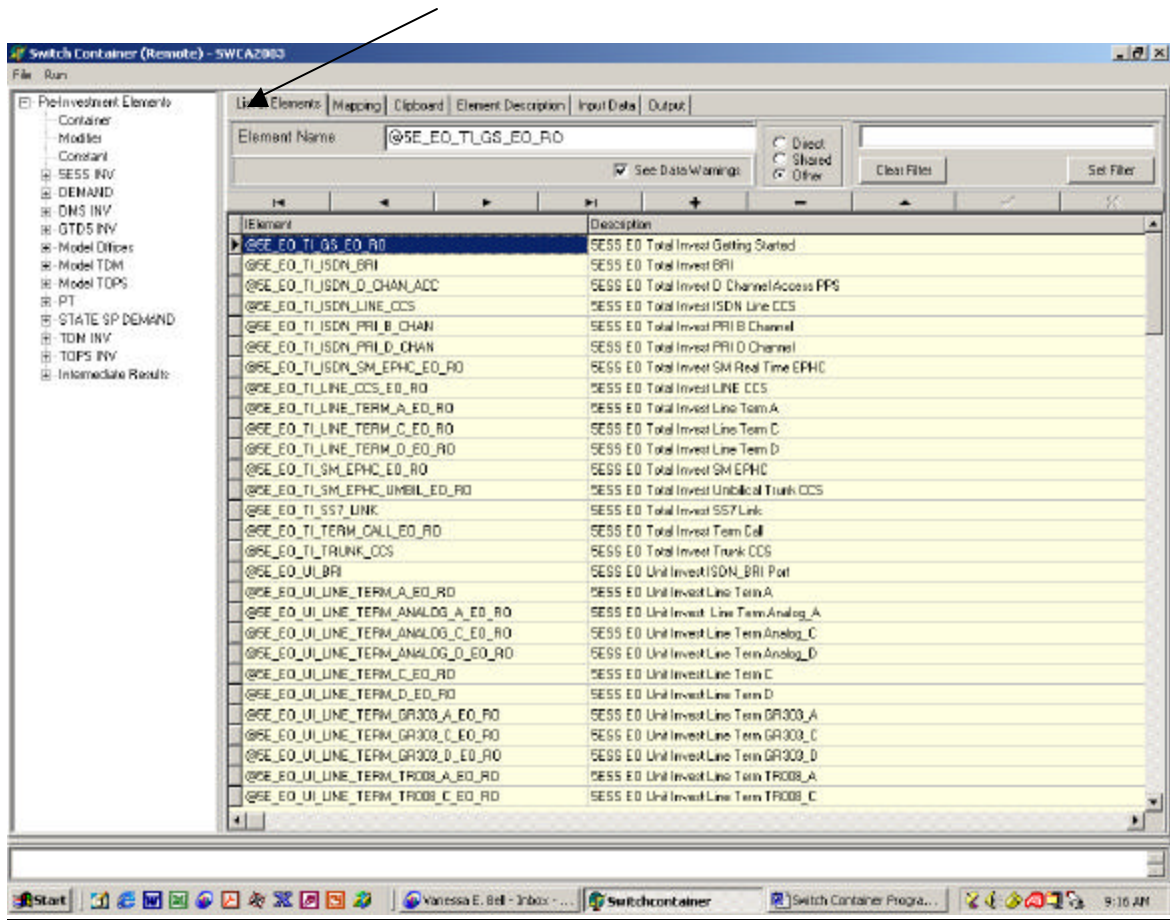
3.4.1   Container

The container is where the mapping procedure takes place, after selecting the ***Mapping Tab***. Click on the word "container" on the Tree View. Drag and drop it in the workspace. In the lower section of the container, the modifier is dragged and dropped to perform operations on the pre-elements.

Container can be named or labeled. This is helpful especially if many containers are required in a mapping an IE. To label a container, point to the container and right click the mouse. A text cell will appear. In the section, which reads "Name", enter a name for the container. To save and exit this function, double click on the property section of the cell.

When you test run the mapping, the label(s) will appear in the bottom portion of the screen with the formula listing.

3.4.2   Modifier

The modifier is where the operators (mathematical operations such as plus, minus, multiple and divide) are selected. Click on the word "modifier" on the Tree View then drag and drop it in the container. The default operator is multiplication. Right click the mouse to perform the basic Microsoft functions such as copy, cut and paste.

The modifier is light olive in color to distinguish it from the container.

3.4.3   Constant

During the mapping process, a constant value may be required for most if not all IE(s). This option will maintain that constant value. Drag and drop the word "constant" from the Tree View to the workspace, container or the modifier. A small white cell will appear. Right click on the mouse while keeping the cursor on the white cell and a drop down menu will appear. Select the appropriate option from this menu.

3.5   Tabs
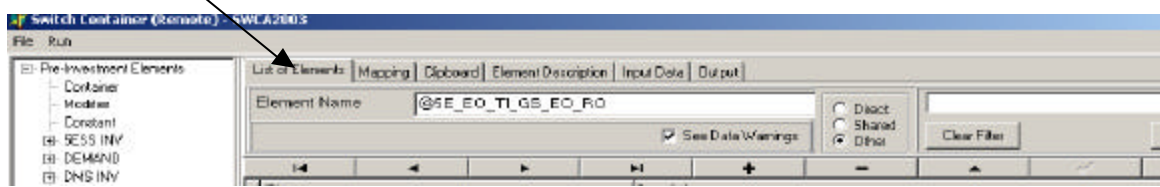
3.5.1   List of Elements

The existing elements and descriptions will appear on the screen, once this button is selected. If this is a new project, the screen is empty.

All intermediate IEs should be identified with "@" in the beginning of the IE name. These IEs will appear in the Tree View because they are used to create mapping for other IE(s).

3.5.2   Mapping

Select an element by clicking the cell to the left of the element name. When this button is selected, the mapping for that element will appear. You can modify the mapping at this time. If you want to save the modifications, select the *Save Mapping* speed button.

If this is a new IE, select container(s), modifier(s), pre-elements (listed on the Tree View) and operators required to create the desired IE.

3.5.3   Clipboard

Use the clipboard to copy and/or paste mapping information.

3.5.4   Element Description

The description of the elements will appear, when this tab is selected. Selecting the *Upward Arrowhead* speed button to modify an existing description. Click on the section of the screen where the description appears and complete the change. To save the changes, click on the *Check Mark* speed button.

If a new IE is being developed, enter the description in the workspace, then click the *Check Mark* speed button to save it.

3.5.5   Input Data

To view the data in the input file, click on this tab. This screen will allow you to modify the existing information. Once any changes are made and saved, the Container Program will maintain those changes. The original CSV file, which was uploaded into the Container Program, will not be changed. Use the Export Input as CSV option, on the File menu, to create a new input file (See section 3.2.9 of this guide).

Note: The values in the table can be changed. However, if the item name is changed, any existing mapping that used that item name will not process. The mapping will have to be changed to reflect the new name.

3.5.6   Output

Once the mapping is complete and is processed, the output of the mapping can be viewed via this screen.

3.6   Speed Buttons
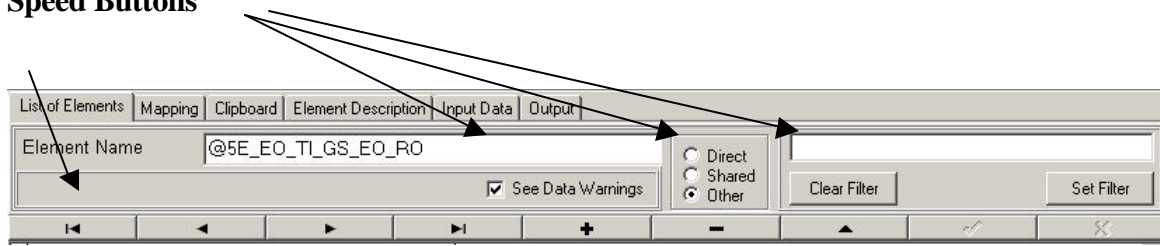
**3.6.1   See Data Warnings**

The program checks data and provides warning statements if data is missing from the mapping prior to testing. The statements will appear in the bottom section of the mapping screen where the equations appear.   A check mark in the cell indicated the warning statements will appear. If the user does not want to see these warnings, click in the cell to remove the check mark.

3.6.2   Direct, Shared, Other

IE(s) should be indicated as direct, shared or other. Select the appropriate option.

3.6.3   Clear Filter and Set Filter

Below is a view of these speed buttons as they appear on the main screen.

```
NODE2='Trunks'

 Clear Filter                    Set Filter
```
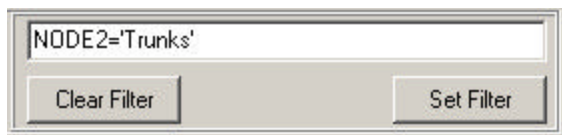
Use Clear Filter and Set Filter speed buttons to view specific data in the table tabs (i.e.
List of Elements, *Input Data* or *Output*). For example, to view only input data identified
as AIN, in the column heading, NODE3, place the cursor in the speed button input
window. Type in the information as it appears in the above view then click the *Set Filter*
button. In this example, the *Input Data* tab screen will display only data, which list AIN
in the NODE3 column. To view all of the data in that table, cancel the filter by selecting
the *Clear Filter* speed button.

Also, only those records that meet a filter's conditions are available to an application.
For example, if you want to create mapping using only AIN information as defined
above, the Tree View would list only the records with NODE3 equals AIN.

To filter strings bases on partial comparisons, use an asterisk as a wildcard. For example:

JURISDICTION = 'M*'

Other operators are as follows.

Operator	Meaning
<	Less than
>	Greater than
>=	Greater than or equal to
<=	Less than or equal to
=	Equal to
<>	Not equal to
AND	Tests two statements are both True

NOT	Tests that the following statement is not True
OR	Tests that at least one of two statements is True
+	Adds numbers, concatenates strings, ads numbers to date/time values (only available for some drivers)
-	Subtracts numbers, subtracts dates, or subtracts a number from a date (only available for some drivers)
*	Multiplies two numbers (only available for some drivers)
/	Divides two numbers (only available for some drivers)
*	Wildcard for partial comparisons

By using combinations of these operators, you can create fairly sophisticated filters. For example, the following statement checks to make sure that two test conditions are met before accepting a record for display:

(NODE2 = 'STP') AND (NODE3 = 'A link')

3.6.4 Left Arrowhead Blocked

This speed button places the cursor on the first record.

3.6.5 Left Arrowhead

The cursor is moved to the previous record listed on the screen when this speed button is selected.

3.6.6 Right Arrowhead

The cursor is moved to the next record listed on the screen.

3.6.7 Right Arrowhead blocked

The cursor is moved to the last record listed on the screen.

3.6.8 Plus Sign

Insert a new record.

3.6.9 Minus Sign

Omit the record the cursor is on.

3.6.10   Upward Arrowhead

Edit the record the cursor is on.

3.6.11   Check Mark

Post or save the edit.

3.6.12   X

Cancel the edit.

4.0   Input Files

The input file is a CSV file, which is uploaded into the SS7 Container Program and viewed in the program when the *Input Data* tab is selected. See *Import* in the dropdown menu screen option, **File** for more details.

The input data in this file will determine the structure of the Tree View. The file format is as follows.

Column	Input Data
Jurisdiction	Project Jurisdiction (e.g. CA)
Node 1	Main branch of the Tree View on the main screen. Node 1 items are listed below. 1. X INV (x = Switch Type) 2. TDM INV 3. TOPS INV 4. Model Offices 5. Model TDM 6. Model TOPS 7. PT 8. State SP Demand
Node 2	Second branch of the Tree View on the main screen. General description of the worksheet that contains the input data.
Node 3	Third branch of the Tree View on the main screen. General title of the column headings as they appear in the worksheet which contains the input data.
Description	Description of the input element.
Element	Input element name. This name will appear on the Tree View and will be used to develop the Investment Element mapping.
Value	Input element value. This value will be used to create the Investment Element investments, which appear in the Output file.

The data sources for the input file are as follows.

Node 1	Spreadsheet	Worksheet
X INV	Y X Model	SCIS EO Outputs and SCIS RO Outputs
TDM INV	Y TDM-TOPS Weighting Model	SCIS TDM and TOPS MO Outputs
TOPS INV	Y TDM-TOPS Weighting Model	SCIS TDM and TOPS MO Outputs
Model Offices	Y X Model	SCIS Input Statistics EO and SCIS Input Statistics RO
Model TOPS	Y TDM -TOPS Weighting Model	TDM and TOPS Statistics
Model TDM	Y TDM -TOPS Weighting Model	TDM and TOPS Statistics
PT	Switch Container Program Outputs	
State SP Demand	Y X Model	State Specific Demands (Note: state specific demands are common to all switch types.)

X = Switch Type

Y = State

PTs are past through values. Once the project is processed (see Section 3.3), a dialog box will appear. Select the yes button to create PTs.

5.0   Begin a new project

STEPS	TASK	REFERENCE
1	Create Tables (e.g. Element Mapping table, Value table and Investment Element table)	Section 3.2.2 and/or Section 3.2.4
2	Create and define the Project.	Section 3.2.5
3	Create IE(s). On the *List of Elements* tab, enter the IE name in the Element Name box. Select direct, shared or other on the toolbar. If the IE is an intermediate IE, place "@" as the first character of the IE name. On the *Element Description* tab, enter the IE description and click the check mark, on the toolbar to save the information.	Section 3.5.1 and Section 3.5.4
4	Create mapping.	Sections 3.3 3.4 3.5.2 3.5.3
5	Create Output table.	Section 3.3.2 and Section 3.5.6