Guide for Re-creating VM/CMS Mainframe Focus Reports Using WebFOCUS
Re-creating VM/CMS Mainframe Focus Reports Using WebFOCUS

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Re-creating VM/CMS Mainframe Focus Reports Using WebFOCUS

Introduction

There are several ways to go about re-creating your VM/CMS Focus reports within WebFOCUS. Each report will have to be manually re-created. Unfortunately, there is not an automated tool available to do this for you. To begin the process, I have found it best to obtain a copy of the focus code that you want to convert to have it handy for a reference as you move through the conversion process. I’ve found it helpful to keep a printed hard copy as a guide and to use an electronic copy of the old focexec on my desktop to cut and paste code from.

Before you start you will have to ensure that you have a userid that is authorized to access WebFOCUS and also authorized access to the Domain (aka: data source) that you wish to use.

If you need to obtain access please go to the Data Warehouse Services web page and follow the instructions found there to obtain access to WebFOCUS. The URL to reach that website is: http://datawarehouse.uconn.edu/
You will find the access instructions and links to the access request forms along the upper right side of the page.

A huge amount of thanks and appreciation goes out to Penny Portuguez for her assistance with organizing the content of this document into the well-polished finished product that you are about to read; Thank you Penny!

Writing WebFOCUS Queries / Re-Creating Focexecs

There are two ways that I will cover, using InfoAssist, the Information Builders GUI tool, and using the EDIT function to write FOCUS code. There is also a third method, using both of these methods combined; I have found this to be the most effective of the three.

Brief Explanation of the Working Parts of the WebFOCUS Editor Tool

The WebFOCUS editor tool is an easy way to create and/or modify FOCUS code either from scratch or from opening focexecs that you’ve created with InfoAssist. When you open EDIT you are presented with a “Windows” like setup with Toolbars, Tool Ribbons, Click to Drop Menus and Icons to click on. The icons are standard and easy to figure their purpose; mouse over them to highlight their function if unsure.
The function icons are, from the left; Cut, Paste, Copy, Delete, Select All, Undo, Redo, Find/Replace, Go To, Uppercase, Lowercase, Text Color, Fill Color, Font Type select and Font Size select.

Above the tool ribbon are the “click-on” functions of Save, Save As, Run, Quit and Help. Make sure to explore and make use of the Help tab. The Help tab is very effective and actually provides quality advice as well as useful material.

A few paragraphs below is the Focus code generated by InfoAssist when I created the CarDemo4How2.focexec. (Note: without the code for the join example –that is covered in a later section.)

The first area that is shown when you open the editor tool is the “Do Not Delete or Modify” section. Leave this area alone and do all of your code edits and additions below this section.

There is another system generated comment next; -*COMPONENT=Define_CAR

That identifies the field(s) that were defined in InfoAssist; it is followed by the DEFINE code.

The TABLE FILE command identifies the file being queried, here the CAR file. Next is the PRINT verb that was changed using InfoAssist when this focexec was created. I have printed COUNTRY, CAR, MODEL, SEATS, MPG, RETAIL COST by CAR but hiding that sort field using NOPRINT. I have subtotaled the Measure/Properties numeric fields SEATS, MPG and RETAIL_COST. The WHERE clause is the filter that I set on the COUNTRY field, I selected only cars made in ENGLAND. I created a report header; here identified by the ON TABLE SUBHEAD command followed by the text for the header contained within quotes. I have inserted the system run date using the “&DATE” focus system variable, also contained within quotes. The “ON TABLE” commands that follow are for formatting or holding the report output. Here the “ON TABLE PCHOLD FORMAT HTML” tells WebFOCUS that I want the output to go to my browser in HTML format. The following ON TABLE commands provide the codes to make the output look like it will when I generate the code and run the report using InfoAssist, they include the SET STYLE options.
Changes can now be typed or additions made to this code through the EDIT interface. Note that once you have changed your code using the EDIT tool and saved your work the focexec will not be able to be opened using InfoAssist. You may want to do a SAVE AS and save it with a different name.
Converting your VM/CMS Focexecs to WebFOCUS

The SLINFO FOCEXEC will be used for our working example as I walk you through the steps required to make an “old mainframe focexec” run in the WebFOCUS environment. The mainframe VM/CMS SLINFO Focexec is attachment #1.

The SLINFO FOCEXEC uses the D9530F15 SUBSIDIARY LEDGER file and its associated Master File which describes the data. The mainframe VM/CMS D9530F15 Master File Description is attachment #2.

The SLINFO FOCEXEC code:

```
*-THIS REPORT CAN BE EDITED EASILY FOR LISTS
*-IN S/LS
DEFINE FILE D9530F15
FSID/A7 = FS19B|FS19C;
PROJD/D15.2M = FS949 + FS960;
ACCT/A6=FS005;
END
TABLE FILE D9530F15
HEADING CENTER
"SLINFO ON MOVEINV8"
"</2"
"&DATE </2"
SUM PROJD
BY FS005 AS ACCOUNT
BY FS066
BY FS042
BY FS142 AS ACCT-DESC
BY FS144 AS DESC-CONT
BY FSID
BY FS028
BY FS027
BY FS042 AS PROJECT
BY FS142 AS ACCT-DESC
WHERE FS042 CONTAINS 'OCIP'
END
-RUN
```
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What follows is the same code that I manually recreated to WebFOCUS using the InfoAssist Tool:

```sql
*-Do not delete or modify the comments below
*-INTERNAL_COMMENT LINE#0$CjxSb290lHzlcnNpb249iEuMCgPqogICA8T2JqZWN0IG9iamVjdElkPSJUYWJsZV8xliA...
*-INTERNAL_COMMENT LINE#1$X1NVQIINJREIBULifTEVER0V5PC9FbnRyeT4KiCAgICAgPC9Qcm9wZ... 
*-Do not delete or modify the comments above
DEFINE FILE D9530F15_HISTORICAL_SUBSIDIARY_LEDGER
  PROJD/D15.2M=D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL4.CM_ACTUAL +
  D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL4.YTD_ACTUAL ;

  FSID/A7=D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL1.UC_OLD_FUND |
  D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL1.UC_OLD_SID ;

END
TABLE FILE D9530F15_HISTORICAL_SUBSIDIARY_LEDGER
  SUM PROJD
  BY D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL1.ACCOUNT_NUM AS 'ACCOUNT'
  BY D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL1.FUND_GROUP
  BY D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL1.ACCOUNT_DESC
  BY D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL2.LONG_DESC_A AS 'ACCT-DESC'
  BY D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL2.LONG_DESC_B AS 'DESC CONT'
  BY FSID
  BY D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL2.DELETE_FLAG_FS027
  BY D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL2.FREEZE_FLAG_FS028
  BY D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL1.ACCOUNT_DESC AS 'PROJECT'
  BY D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL2.LONG_DESC_A AS 'ACCT-DESC'
  WHERE D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL1.FISCAL_YR EQ '12';
  WHERE D9530F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL1.ACCOUNT_DESC CONTAINS 'OCIP';
ON TABLE PCHOLD FORMAT HTML
ON TABLE NOTOTAL
ON TABLE SET PAGE-NUM NOLEAD
ON TABLE SET SQUEEZE ON
ON TABLE SET EMPTYREPORT ON
ON TABLE SET HTMELSE ON
ON TABLE SET HTMLENCODE ON
ON TABLE SET STYLE *
INCLUDE=IBFS:CFG/F ILE/IBI_HTML_DIR/javaassist/intl/EN/ENIADefault Combine.sty,$
TYPE=REPORT, OBJECT=STATUS-AREA, $
TYPE=REPORT, OBJECT=CURRENT-ROW, $
TYPE=REPORT, OBJECT=CALC-AREA, $
ENDSTYLE
END

-RUN

As you can see, there are significant differences between the two pieces of code. What’s really interesting is that they produce the same results when run in their respective environments.

Page | 8  8/12/2015 Long, Michael Q:\UIT S\Data Management\DMS\WebFocus Training\HowTo Recreate Your VM CMS Focexecs in WebFOCUS (00000002).docx
How do we get from FOCUS code that is from the mainframe and similar to the first example? First, I printed out the FOCUS code for SLINFO (SLINFO FOCEXEC – attachment 1) and the FOCUS Master File Description (MFD) from the mainframe (D9530F15 – attachment 2). I then obtained a copy of the Master File Description from WebFOCUS (d9530f15_historical_subsidiary_ledger.mas – attachment 3). I then find and map out the fields I need to use from the two MFDs. Some of the fields you will need will be easy to find and translate from the VM/CMS MFD to the WebFOCUS MFD, other fields will be cryptic and hard to find because the fields have cryptic, code like names and an “Alias” name was used on the mainframe. A good example of this is the field named FS005. On the mainframe FS005 is the account number field. It has an ALIAS NAME of ACCOUNT_NUM in the mainframe MFD. It is called ACCOUNT_NUM in WebFOCUS with no reference being made to FS005 at all. This is the trickiest part of the conversion, actually finding and selecting the correct field names. The logic, the computes, and the defines all work the same way, you just have to find the correct field names to use. There are times when there are multiple fields with the same name but in different segments of the file, make sure you are pulling the correct data field from the correct location in the file.
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USING InfoASSIST and Edit to Recreate a VM/CMS Focexec

You can cut and paste an entire Focexec from the mainframe into an open edit session within WebFOCUS but chances are it will not run without significant modification. I will now demonstrate how I got from the SLINFO mainframe code to the SLINFO WebFOCUS code.

1) Select desired Domain – in this example we want the FRS History Domain.

2) Opening InfoAssist - Next open the plus sign in front of the domain name, select My Reports and then InfoAssist.
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3) Select a file to be used, here the D9530F15_HISTORICAL_SUSIDIARY_LEDGER.

4) The “Open” File Workbox - Click on that master file name to select it. The name will then be pushed to the File name: box and the OK button will become highlighted and active. Click on OK; the “Open” box will close and the InfoAssist workspace will open and be presented to you.
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The InfoAssist workspace:
5) Selecting the VERB to use – in the SLINFO Focexec the **SUM** verb is used – that is the default so no change is required. Print, Count and List are the other VERBS available for your use.

6) Defining Fields in InfoAssist - SLINFO sums the field called PROJD which is a defined field. There are 3 defined fields within SLINFO. Click on the **DATA** tab to get to the **DEFINE** tab.

7) Naming and Describing Defined Field - Name the newly defined field at the upper left in the Field box; **PROJD**. Give the new field the desired format, here D12.2 is going to be changed to D15.2M. Both show on the screen shot following the one below.
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In SLINFO from the mainframe the PROJD field is defined as:

\[ \text{PROJD/D15.2M} = \text{FS949 + FS960}; \]

You will not be able to find those fields listed in the WebFOCUS Define box as fields you can choose, you’ll have to reference the VM/CMS MFD to find the proper names.

When I find \text{FS949} in the VM/CMS MFD it has an ALIAS of \text{CM_ACTUAL} and a format of \text{D14.2M}. Below that is the other field needed for the equation \text{FS960, YTD_ACTUAL} with the same format.
8) Defining Fields – Short Names and Long Names - Below, I’ve now scrolled down into the list of fields provided along the right margin and I have highlighted **CM_ACTUAL**. (Note: Field name and Format are now changed from #7 above)
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Watch what happens when I now drag the **CM_ACTUAL** field to the define work palette area, the name expands and becomes the fully qualified name as it shows in the WebFOCUS MFD. It is no longer just **CM_ACTUAL** it is **D9539F15_HISTORICAL_SUBSIDIARY_LEDGER.FRS_FYSL4.CM_ACTUAL**. This is important to know when it comes time to change the code in EDIT mode later on.

9) **Creating Equations in Defined Fields** - Now add the **plus** sign to the equation by either typing it in or using the button to select it at the bottom. Then add in the next field, **YTD_ACTUAL**. Click **OK** to exit then **SAVE** your work.
The newly defined field will now show up in the left hand Data area, here in the Measures/ Properties section because it is numeric data. This is now ready to be clicked on and dragged into your report SUM line.
Diagram for #9 showing the newly created DEFINE field at the bottom of the Measures/Properties data stack;

10) Concatenating Two Fields using Define - The next field defined for SLINFO will be FSID. This, on the mainframe, was FSID/A7 = FS19B|FS19C, below is how it gets defined in WebFOCUS. The single “pipe”
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character is used to join the two fields together. Click OK and this field will show in stack of **Dimension** fields since it has an alphanumeric format.

![Image of Detail Field (DEFINE) window]

A define is not needed for the last field in the mainframe example, **ACCT/A6=FS005**, it is not referenced in the final version of the VM/CMS focexec so we do not need to define it.

12) The **TABLE FILE** section tells **WebFOCUS** the name of the file that we want to work with. In the **SLINFO FOCEXEC** example the file we are “tabling” is **D9530F15**.

**TABLE FILE D9530F15**

The **TABLE** command will automatically be inserted into your code if you are using InfoAssist to generate it.
13) The **HEADING section** is coded next in this example, it can go where it was placed in SLINFO or it can go after your PRINT/SUM line, it’s a matter of style and personal preference. The line items in quotes that follow the **HEADING CENTER** command will be treated as your report header. The first line is text, the second line tells WebFOCUS to insert to blank lines in the header and follow that with the date and two more blank lines prior to displaying a data output line.

```
HEADING CENTER
"SLINFO ON MOVEINV8"
"</2"
"&DATE </2"
```

To add this header in InfoAssist click on the **Header/Footer** icon on the upper tool bar.

Once you do that the **Header/Footer** workbox will appear:
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I’ve entered the header text I want, changed the font size, and then centered and bolded the text. In the diagram below I’ve also added the date by dropping the preformatted text box, selecting Date and then choosing the desired date format. You can also just type in &DATE. I’ve also moved the date field from the center to the left margin. I’ll then click on OK to close the box and then I’ll save my work by clicking on the SAVE icon on the top toolbar.

14) The VERB line: Changing SUM to PRINT, COUNT, or LIST - Our verb line is next, here SUM is used and then followed by the data elements that are to be printed and or summed. The SUM verb will automatically be inserted into your code by InfoAssist.

SUM PROJD

I’ve dragged the defined field PROJD to the SUM line in this example. Sum can be changed to Print, Count or List by using the right mouse click, it depends upon your needs.
15) **BY fields – Sorting** - Sort fields are identified with the **BY** command. Here there are 10 BY fields so we will be SUMming PROJD BY the field FS005 (As ACCOUNT displays the field’s print column header “AS ACCOUNT”) etc....

```
BY FS005 AS ACCOUNT
BY FS066
BY FS042
BY FS142 AS ACCT-DESC
BY FS144 AS DESC-CONT
BY FSID
BY FS028
BY FS027
BY FS042 AS PROJECT
BY FS142 AS ACCT-DESC
```

Here are those same fields as they are named in the D9530F15 WebFOCUS Master dragged and dropped onto the **BY** or sort line in InfoAssist;

![Query Diagram](image)

We want to change the printed field name of the **LONG_DESC_A** field to **ACCT-DESC**. To do this right mouse click on the field to open up the **BY** field options box and select **Change Title**:  

"ACCT-DESC"
When the **Edit Title** workbox opens enter the desired text, here “**ACCT-DESC**” and the click on **OK** to close the box. **Save** your work.

16) **Filters or “where clauses”** enable selecting of the data to be retrieved. In this case when the field **FS042** contains the value ‘**OCIP’** it will be included in the report output.

**WHERE FS042 CONTAINS 'OCIP'**

The field VM/CMS field **FS042** maps to the WebFOCUS field **ACCOUNT_DESC**. Right mouse click on **ACCOUNT_DESC** and open the select box to see the **FILTER** option. Click on it to open the **Filter** workbox.
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The filter workbox: enter OCIP in the Add: box and then click on the green plus sign to the right to add it to the Selection Values: box.
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The filter workbox after OCIP has been added to the **Selection Values** box. Click on the **OK** at the upper left of the Filter box to close it. **Save** your work.

There are 2 other selection choices on the Filter tool bar that need covering even though they are not used in this focexec example, the **Values** and **Prompt** dropdown boxes.

When you select **Values** the following dropdown selection list opens:

- Fetch All Values From Source: retrieve all values for this field in the source database.
- Fetch Values from Disk File: retrieve all values for this filter from a disk file.
- Fetch First Value in Source: retrieve the first field value in the source database.
- Fetch Last Value in Source
- Fetch Minimum
- Fetch Maximum

This enables you to choose the way you would like to populate the filter values.
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- Fetch last Value in Source: retrieve the last field value in the source database.
- Fetch Minimum: retrieve only the minimum field value in the source database.
- Fetch Maximum: retrieve only the maximum field value in the source database.

In our example we are using a simple, fixed filter on the value “OCIP” that we entered for run-time filtering / selection.

The **Prompt** dropdown selection list provides you with filter options that enable you to have:

- **No Value Prompt**: no prompt for filter data value input at run time
- **Prompt using Data Values (Dynamic)**: retrieve all field values for selection.
- **Prompt using Selection (Static)**: select only the field values entered and presented.
- **Prompt using Text Input (Simple)**: free form text box to enter any data to filter on.

There are performance issues to consider when retrieving the filter selection values from a database at run time. Please keep this in mind. If WebFOCUS has to retrieve the data values needed to populate a filter at run time it will extend the total length of time needed to execute the query.

17) The **END** statement signifies to WebFOCUS that this is the end of this query request and the **–RUN** executes the code.

```
END
–RUN
```

18) **Save your work** by clicking on the diskette icon or by clicking on the big blue IA box in the upper left. That will open a selection box with options to **SAVE** and **SAVE AS**.
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19) Execute your focexec - To execute your focexec click on the Run button;

It will then execute and the results will be presented to you. Below is a full screen view of the report after it has been run/processed.
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Close up view of the report section in WebFOCUS InfoAssist:

Screen print from VM/CMS showing a partial view of the same report, it spans two screens in width.
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20) **Exiting InfoAssist** - Save your work. Exit from InfoAssist by using `[Ctrl + E]`, the red X in the upper right corner,

![Close button](image)

...or by using the blue **InfoAssist logo drop down** at upper left and selecting **Close** to exit.

![InfoAssist close](image)

---

<table>
<thead>
<tr>
<th>ACCOUNT</th>
<th>GROUP</th>
<th>ACCOUNT</th>
<th>ACCT-DESC</th>
<th>DESC-CONT</th>
<th>FSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>428004</td>
<td>7C</td>
<td>NOP UNRLD OCIP LIA</td>
<td>UNRECOVERABLE OCIP LIABILITY</td>
<td></td>
<td>3999999</td>
</tr>
<tr>
<td>771040</td>
<td>7R</td>
<td>DIS OCIP PREMINS</td>
<td>OWNER CONTROLLED INSURANCE PROGRAM</td>
<td></td>
<td>3952010</td>
</tr>
<tr>
<td>771080</td>
<td>7R</td>
<td>DIS OCIP</td>
<td>TEMPORARY BY PHARMACY-TO BE COVERED IN</td>
<td></td>
<td>3952010</td>
</tr>
</tbody>
</table>

21) **Share your Work** - After saving your work and exiting from the InfoAssist tool you may want to **SHARE** your work with others. We have to alter the properties of the report that you’d like to **share**.
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Navigate to the desired domain, here FRS History was used. Then open your My Reports folder followed by the Custom Reports folder and the right mouse click on SLINFO to obtain the pop-open menu. Select Properties;

To share a report check the “Share Report” box. The OK box will become active and you can click on that to save your change to the document’s properties.
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…box checked and “OK” is active. Click it.

22) Viewing Shared Reports - Once your focexec has been shared the icon will change in your Custom Reports folder. It will have been changed from the old document type icon to one that has a red and blue person on either side of the old document icon. In the example below there are two types of document icons. Once a document has been shared it will look like SLINFO in this example.
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23) The Details Box - Open the properties box once again, click on the word **Detail** at the upper left in that box.

The **Detail** box opens. Expand the plus signs to see additional information;
Example of all of the plus signs opened for the **Properties>Details** for the `SLINFO` focexec document. I’ve found this to be a really handy quick way to obtain information about a focexec, especially if you’ve accumulated a large inventory.
Join Files and Hold Files

Creating and Holding Temporary Files
Sometimes you have the need to retrieve and to hold data files temporarily in “working storage”. In Focus and WebFOCUS code these are known simply as “Hold files”. Hold files are created by inserting the ON TABLE HOLD command into your code. This can only be accomplished by using the EDIT tool (in the version of WebFOCUS that we at UConn are currently using, version 7.7.03 – July 2015.)

The format of that command in WebFOCUS is;

**ON TABLE HOLD AS FOCCACHE/HOLDFILENAME** - where **HOLDFILENAME** is the name you supply for the hold file you are creating.

The file being held will be in FOCUS file format unless you give it additional parameters to create a file of a different structure/type. That can be done but it will not be covered within this document.

For the sake of example I will use the following HOLD statement:

**ON TABLE HOLD AS FOCCACHE/MYHOLD01**

...the HOLD file would be called MYHOLD01. When the code is executed WebFOCUS will generate a Master File Description for that file. It too will be created in temporary working storage and it will be available to use for the duration of the virtual session that you are in.

I can then TABLE that HOLD FILE and report off of it or I can use it to join to another file to bring in additional data fields for a report to be created in the future.

Joining Files Together

Two or more files can be joined together to appear as, and be used as, one “logical” file to report from. To illustrate this concept a new, different focexec will be used, one created just to show the steps and code needed to create a simple join. The focexec that was used previously in this document did not contain or require a join to retrieve the proper data.

What follows is the code generated by WebFOCUS InfoAssist to join the old FRS Vendor file to the FRS Voucher file:
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-*COMPONENT=Join_J001

JOIN D9530F25_VENDOR.D9530F25_SG1F25.VENDOR_NUM IN D9530F25_VENDOR 
TO MULTIPLE D9530F26_VOUCHER.D9530F26_DETSEG1.VENDOR_NUM IN 
D9530F26_VOUCHER TAG J001 AS J001

END

The parts of the JOIN command as generated by InfoAssist are;

- the join label - -*COMPONENT=Join_J001
  - the “-“ signifies that what follows is a comment.
  - Join_J001 – the system generated “join name” – this will automatically increment up with each new join statement generated by InfoAssist.

- the JOIN statement including the names of the files to be joined and the relationship of the files to each other;
  - D9530F25_VENDOR.D9530F25_SG1F25.VENDOR_NUM is the field being used as a key to join to another file.
  - IN D9530F25_VENDOR is the name of the file where that join key field resides.
  - TO MULTIPLE is the type of relationship the two joined files will have, here it will be a one-to-many relationship as designated by the key word MULTIPLE.
  - D9530F26_VOUCHER.D9530F26_DETSEG1.VENDOR_NUM is the name of the key field in the file being joined to, this will be the key field with the “many” occurrences.
  - IN D9530F26_VOUCHER is the name of the file where those many instances of that key field reside.

- the TAG or prefix name of the fields that will be referenced by the join,
- and the END statement that tells WebFOCUS to end the current join command.

There is a great deal of information that can shared about JOINS, it is a complex topic. I will briefly cover this in order to introduce the topic and encourage you to read more both through the WebFOCUS Help facility that is always available whether you are in EDIT mode or InfoAssist, or through the use of IBI training, training manuals, and online web fourms.

Creating a Join Using InfoAssist
Joining files together is made really easy with the use of InfoAssist. In this example the FRS Vendor and FRS Voucher files will be joined together. I opened up infoAssist and created a new focexec. I selected the D9530F25_Vendor file as my starting point. When InfoAssist opens I change the SUM verb to PRINT, add the VENDOR_NUM to the Print line and then click on the Data Tab to open the toolbar with the Data selection options;

The Data Tab options available are DEFINE, COMPUTE, JOIN and FILTER, we are interested in the JOIN tab, select that option.
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The Join workbox will open and present you with an image of the initial file selected, the D9530F25_Vendor file, and a tool bar with additional options; select Add New at the upper left.

A selection list of the available files to join to, the target master, will now appear, much like the initial file selection list when first entering InfoAssist. As you hover over each file a short description box will appear. Unfortunately the active cursor did not show in the screen shot, it is hovering over the D9530F26_VOUCHER file in this next example. Once you click on it and select the file it will then populate the File Name: box and the OK button will become active for you to save and exit the join target file selection list box.
The joined files will now appear in the Join workbox with a “join arrow” connecting the common key fields, here **VENDOR_NUM**.

The type of join you are using can be controlled and changed by “editing the join”. Click on the **Edit** button on the tool bar or right mouse click on the red join arrow to highlight the options, select **Edit**.
The **Edit Join** workbox will appear, use this to change and control the join options as desired.

For the sake of keeping this example simple I will name this join **JOIN_001**, accept the rest of the default options and then click on the **OK** button to save and exit the Edit Join workbox. **Save** your work.
The Data display window used to just contain data fields from the D9530F25_VENDOR file and the Dimensions section ended at COUNTRY_DESC.

When the join is in place the fields from the D9530F26_VOUCHER file will be added to the display area and be available for selection and processing. Below, the fields listed after COUNTRY_DESC are all from the D9530F26_VOUCHER file.
Select VOUCHER_NUM and add it to the print line by clicking on it.

Next I will set a limit on the number of records being retrieved when I go to test my join. To do this I will go back to the main tool bar and select the **Slicers** tab and change the default from **All** to **50**.
way when I run the query I only retrieve a small amount of data to test out the join. I can then inspect the results and make sure I've created and coded the join properly. Save your work.

Run the report by clicking on the Run button at the very top or by using [CTRL-R].

The output of the query showing data pulled from both of the files joined together is shown below. This was a simple example created to illustrate the concepts and steps required to create a join condition between two files. Joins can be very complex and may require very intricate coding to get the exact results you want, it depends upon the type and organization of the files being joined. Please see the Help topics on this subject as well as the online Information Builders manuals, as there is a significant amount of material available to look further into this topic.
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Above is the output of the focexec showing data pulled from both the Vendor and Voucher files after they were joined together. Save your work and exit.

The focus code that InfoAssist created for the join can now be examined by using the editor tool. You can cut and paste this code into another focexec as desired.
Creating Queries/Focexecs with InfoAssist

The InfoAssist tool may available to you once you have been granted permission to use WebFOCUS, it depends upon your level of access. To get to the InfoAssist tool login to WebFOCUS using your NetID and password at:

https://bi.uconn.edu/ibi_apps/Controller
Re-creating VM/CMS Mainframe Focus Reports Using WebFOCUS

You will see the domains you have access to, I am working with the SAMPLE domain in the example below. I click the plus sign to open SAMPLE and then click on MY REPORTS>CUSTOM REPORTS and then left mouse click to open up InfoAssist.

Once you open InfoAssist you will be presented with a list of data tables contained within that domain. I have highlighted and will be using the CAR file for this example.
I double left click on the **CAR** file to open it. When I do that the InfoAssist work space opens. The InfoAssist workspace has a familiar tabular layout with windows type drop down menus and toolbars.

**Brief Explanation: Working Parts of the WebFOCUS InfoAssist Tool**

There are 5 main working pieces of InfoAssist, The (1) tool bars at the top of the screen, (2) the Data area on the left margin, (3) the Filter Area below that, the (4) Query section below that and the big area to the right of all of those is the (5) Interactive Design View section. You will see how all of these pieces work together as we build a query.
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The InfoAssist workspace.

When constructing a WebFOCUS report it’s best to start out with an idea of what type of report you would like to generate; HTML, PDF, and Excel are the most popular choices but there are other options available:
Charts and graphs can also be created by clicking on and selecting the Chart output tab. The creation of Charts is not covered within this document, we will be creating WebFOCUS reports using HTML output.

The Data area of the workspace is on the upper left. This is the area where your data is described and the fields you have available are listed. There are two types of data fields, Dimensions and Measures/Properties. Click the plus sign in front of each to open them up for the list of fields. These will be the fields available to you in the table you have selected.

Next, go to the Query section that is also along the left margin and below the Data area. Here we are going to switch the default verb from SUM to PRINT. You may have a need to use the SUM verb but be warned that each item added to the query request line is treated like a SORT or BY field within WebFOCUS.
Left click on PRINT to change the verb to PRINT. Alternately the COUNT and LIST verbs are available to you to use as well. They function as you would expect.

Left click on any data field and a pop-up menu will appear with options for you to select. We want to print this field so we will select that. You can also double click the item and it will be sent to the request line or you can drag and drop it out in the work area.

I will drag and drop several of these fields into the Interactive Design View Area – your work palette area if you will allow me to describe it that way. Below I have dragged and dropped Country, Car, Model, Seats and MPG over. Click on the run button to process the query.
Re-creating VM/CMS Mainframe Focus Reports Using WebFOCUS

Sometimes it is best not to retrieve all of the data when you are designing a new report. To **Preview** and limit the number of records retrieved when still in the design phase of building your report click of the **Records** dropdown selection box and choose a number best fitted to your needs.

When ‘Use Sample Data’ is selected WebFOCUS presents the data fields you have selected with sample alphanumeric characters. The tool populates the ‘sample’ fields with the same number of characters that are specified the field length in the MFD (Master File Description). See a sample below.
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The same report example with the ‘Data from Source’ option selected. Note how actual data from the source file is now populating the report line fields that have been added to the report.

Below, in the right hand of the workspace area, is the results of running the query we have created:
Now, let’s filter the results. I’ll add a filter on country; right mouse click on the Country data element and select Filter.

The filter wizard box will appear;
Open up the Prompt drop down menu for the different styles of Filters available, a static filter where you supply constant values that never change can be created by using the “No Value Prompt”; the “Prompt Using Data Values” is a dynamic prompt that retrieves all of the different values in the field to select from at run time; “Prompt using Selection (Static)” lets you enter and select multiple filter values from a list of choices that you enter; “Prompt using Text Input (Simple)” enables you to type freeform values into the filter selection box.

We will select “No Value Prompt” and enter the filter value of “ENGLAND”.

Once I select No Value Prompt and enter “ENGLAND” click on the green plus sign to the right of the entry box to add the value to the filter.
After adding the filter value of ENGLAND click on the OK button at the upper left to exit the filter wizard.

The field COUNTRY now shows up in the filter box along the left margin. Execute the query and you’ll see the filter applied in the RESULTS section which here is labeled REPORT(0).

You can add as many filters as you find it necessary to obtain your desired results. You may want to SAVE your work in progress after you add each new filter.
Now, let’s add a SORT or also known as a BY field to the query. Right click on RETAIL_COST and select SORT.

The field RETAIL_COST now shows up in the BY line section in the Query box. We can right click on the field to obtain options including the sort options available to you. You can see the other options that are available as well including Break, Visibility (sort with or without printing the sort field), Change Title, More and Delete. Here I’ve selected Sort > Sort > Ascending.

Now when I run the report RETAIL_COST is now included in the results and the values are ascending.
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Let’s add a sub total on the **CAR** field. Drag and drop it onto the **BY** area or double click on it to send it there. Below it has been sent to the top of the **BY** line area and is highlighted. It shows on the right panel as soon as it has been dropped on the **BY** line.

Next, right click on the highlighted **CAR** field and select **Break>Subtotal>On**
When we hit **RUN** the results will automatically show the subtotal for any **MEASURE/PROPERTY** field that has not been used as a **BY** field. In this example the fields **SEATS** and **MPG** fall into that category and are subtotaled. Note that **RETAIL_COST** has not been subtotaled because it is on the **BY** line. If we move it off of the **BY** line and into the **PRINT** line it will subtotal that field when we hit **RUN**. See the second screen shot below for that.
We can still sort by CAR but hide the field instead of displaying it by right clicking the CAR field that’s in the BY line area and selecting Visibility>Hide

You’ll notice two things that will happen, the “Hidden” icon with the eyeball is illuminated and the CAR field is removed from the PRINT line in the report and the values for the CAR field are placed in a row above the subtotal line. SEATS, MPG and RETAIL_COST are now subtotaled.
Add a Header and or Footer to the report by clicking on that icon on the toolbar, highlighted below.

When you click on the drop down arrow within that box the following choices are available:

For this query I am going to select **Report Header**. When I do that the Header/Footer work box appears. You can enter any text you would like at the **“Enter text here”** prompt. The familiar text formatting options are available on the tool bar; Bold, Italics, Underscore, Left justified, Centered, Right justified, etc. Options are available to select the color of the text, the header/footer background “fill” color. You can switch between Report Header, Page Header, Page Footer and Report Footer by clicking on any of those options. The “eraser” icon resets the options back to the default template options.
last icon, the “page” on the far right of that toolbar is set up to insert preformatted text such as “Draft, Confidential, Page X of Y, Date, Time, Created by, etc...

For our exercise I will enter the header text as “**Car File Demo Exercise**”, give it a nice header font of **Arial Black**, make the font size 18 and Center it. Then click Apply then **OK** and the box will
Re-creating VM/CMS Mainframe Focus Reports Using WebFOCUS

disappear.

Click on the **RUN** button to see the header added to our report.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>CAR</th>
<th>MODEL</th>
<th>SEATS</th>
<th>MPG</th>
<th>RETAIL_COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLAND</td>
<td>JAGUAR</td>
<td>V12XKE AUTO</td>
<td>2</td>
<td>16</td>
<td>8,878</td>
</tr>
<tr>
<td>ENGLAND</td>
<td>JAGUAR</td>
<td>XJ12L AUTO</td>
<td>5</td>
<td>9</td>
<td>13,491</td>
</tr>
<tr>
<td><strong>TOTAL JAGUAR</strong></td>
<td></td>
<td></td>
<td>7</td>
<td>25</td>
<td>22,369</td>
</tr>
<tr>
<td>ENGLAND</td>
<td>JENSEN</td>
<td>INTERCEPTOR III</td>
<td>4</td>
<td>11</td>
<td>17,850</td>
</tr>
<tr>
<td><strong>TOTAL JENSEN</strong></td>
<td></td>
<td></td>
<td>4</td>
<td>11</td>
<td>17,850</td>
</tr>
<tr>
<td>ENGLAND</td>
<td>TRIUMPH</td>
<td>TR7</td>
<td>2</td>
<td>25</td>
<td>5,100</td>
</tr>
<tr>
<td><strong>TOTAL TRIUMPH</strong></td>
<td></td>
<td></td>
<td>2</td>
<td>25</td>
<td>5,100</td>
</tr>
</tbody>
</table>
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I’ll open the Header again by clicking on the toolbar icon and add the date to the header. When it opens I’ll tab down and enter the text &DATE (in all capital letters) and then left justify it. I’ll then click on APPLY and then OK to close that workbox.

The report with the date in the header.
DEFINE and COMPUTE – Creating New Fields

Typically not all of the data fields we want in a report are available for us within the data tables. In WebFocus we can DEFINE and COMPUTE new fields.

Using DEFINE

Click the Data Tab and then click Detail (Define).

Define is used to create a new virtual field that will be created (evaluated) with each and every record retrieved from the database. DEFINE can be costly to use when it comes to data retrieval time. This is especially important to remember when dealing with large volumes of data. Select the DEFINE tab to open the DEFINE wizard tool. The “Detail Field (DEFINE)” box opens:
Once that opens change the default name of the new field to whatever you desire, here I will use **Net_Profit** and accept the default field format of **D12.2** (Decimal format with two places after the decimal point) in the box to the right of that.

I want to select the fields **RETAIL_COST** and **DEALER_COST** and subtract them to get my **NET_PROFIT**. As I mouse over **RETAIL_COST**, or any field for that matter, and you will see information about that field as it’s described in the Focus Master File. Double click on the field to send it into the **DEFINE** workspace palette.
Click on the **minus** sign button below the work palette to send that to our equation above or just type it in directly. Mouse up to the **DEALER_COST** field and double click that to add it to the equation. Note how the fields are listed in the box versus how they are listed in the select panel to the right. In the Define workbox the fields have the full field name, File, Segment, FieldName; **CAR.BODY.RETAIL_COST** and **CAR.BODY.DEALER_COST**. This is important to know and remember when dealing with the files that you will be working with later on when creating or re-creating your own focexec queries.
Click the OK button at the bottom of that box to close out of the DEFINE workbox. Once you do that the new field will show up in your Data area along the left margin. It will either be in the Dimensions or Measure/Properties section depending upon what fields were used to create the Defined field. The NET_PROFIT field we created is in the Measures/Properties area and can now be dragged and dropped or double clicked onto the PRINT line. You may want to SAVE your work after creating each DEFINE.
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Here I’ve also added the field **DEALER_COST** to the **PRINT** line to help illustrate the effect of the **DEFINE** field function. I had yet added it previously to the **PRINT** line but want it to show now.

I’ll click the **RUN** button to produce the report that now includes our defined field **NET_PROFIT** as well as **RETAIL_COST** and **DEALER_COST**, the field used to create it. Because it is a Measure/Property type note how it automatically has the **SUBTOTAL** option applied to it since we have that on still.

Using Compute

**Compute** on the other hand, creates a new virtual field but only for the records that are actually retrieved by the focexec, after it is retrieved, sorted and summed. **COMPUTE** is more efficient to use than **DEFINE**. Select the **COMPUTE** tab to open the **CREATE** wizard tool and create new virtual fields at **RUN** time.
To keep this illustration simple I will **COMPUTE** the new field **NET_SALES_PROFIT** using the same two fields we used to define **NET_PROFIT**. Click on **Summary (Compute)** to open the **COMPUTE** wizard. It looks the same as the define workbox when it opens.

First I will change the name in the Field box to “**NET_SALES_PROFIT**”. I’ll leave the Format **D12.2** and then drag the two fields I want to the **Compute** work area along with the minus sign needed to create the equation. I will then click on **OK** to exit the **COMPUTE** wizard. It is a good idea to save your work after creating new computed fields.
When we created a new field using **DEFINE** the new field showed up in the **Measure/Properties Data** area. When using **COMPUTE** this will not happen, new **COMPUTED** fields will only show up on the PRINT line.

Click on the **RUN** button to see the new **COMPUTE** field in the report. Note also that because we created this new field using numeric Measure/Properties type data it will automatically get a **SUBTOTAL** function placed on it because we previously turned that on.
Joining Two or More Data Sources

Join will enable you to join two or more data sources. Click on the Join tab to open the JOIN wizard.

When the Join Wizard work box opens we will want to click on “Add New” next to the green plus sign.
When we click on **Add New** the list of available files for you to join to will appear in a selection box.
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I will select **CAROLAP** for this example and then click on **OK**. I will then click on the **COUNTRY** field in the **CAR** file and drag it over to the **COUNTRY** field.

This will join these two tables together on the shared field **COUNTRY** and make them appear as one table to WebFOCUS. The fields from the joined table will show up for your use in the Data section along the left margin. You can now drag and drop them into any part of your report print line, header/footer, define, compute, etc.
(Note – this example creates a “Where based join because the CAROLAP file is not indexed. You should not run into that when joining the tables that you will be working with. I’ve used this just to demonstrate the basics of creating a join.)

**Saving Your Work**

There are several ways to save the report. The easiest is to use `[Ctrl+S]` the Control and “S” keys. Almost as easy is clicking on the Floppy Disk icon which is highlighted below. Another way is to click on the big blue IA logo at the top left side.

When you do that a drop down menu will open and let you save the report, do a save as, as well as other options.

I’ve called this report CarDem4How2 and saved it in my reports folder. Here is how it will show up when I open the **My Reports>Custom Reports** folder in the **SAMPLE** Domain.
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Right click on the report name to open another menu with options available for your usage. **Run** and **Run Deferred** are just like they sound, the **InfoAssist** option will open the InfoAssist tool. You can cut and paste the query into another folder (if you have permission in that folder). You can delete a focexec; publish a focexec, schedule it to run and Add it to your favorites. You can also **EDIT** your focexec by selecting **Editor**. I will go through using the **Editor** option next. But first, I will open the focexec we just created using InfoAssist with the WebFOCUS Editor tool.

Scroll down and select **Editor**
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When you do that the Editor tool will open in a small window, size it up to full screen size at the upper right.

Full screen view of the sample focexec just created:
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```plaintext
/*Do not delete or modify the comments below
 */
/*INTERNAL_COMMENT LINE#0C1xShb290Hz1cnNpbc249I3EwMC1gProgICAA%T2JqZWN0IG9iamVjdElkPSJUYWJzZVg
 */
/*INTERNAL_COMMENT LINE#1ICAgICAgIDxFbnRyeSB0eXBPSJqYXZhLmxhbmcuU3RyaW5nIiA+Q0FSPC9FbnRyeT4
 */
/*Do not delete or modify the comments above

/*COMPONENT=Define_CAR
DEFINE FILE CAR
  NET_PROFIT/D12.2=CAR.BODY.RETAIL_COST - CAR.BODY.DEALER_COST ;
END
TABLE FILE CAR
PRINT CAR.ORIGIN.COUNTRY
CAR.COMP.CAR
CAR.CARREC.MODEL
CAR.BODY.SEVERITY
CAR.SPEC.NAME
CAR.BODY.RETAIL_COST
CAR.BODY.DEALER_COST
NET_PROFIT
COMPUTE NET_SALES_PROFIT/D12.2=CAR.BODY.RETAIL_COST - CAR.BODY.DEALER_COST ;
BY CAR.COMP.CAR NOPRINT SUBTOTAL
WHERE CAR.ORIGIN.COUNTRY EQ 'ENGLAND';
ON TABLE SUBHEAD
  "Car File Demo Exercise"
  "eDATE"
ON TABLE PCHOLD FORMAT HTML
ON TABLE NOTOTAL
ON TABLE SET PAGE-NUM NOLOAD
ON TABLE SET SQUEEZE ON
ON TABLE SET HTMLCSS ON
ON TABLE SET HTMLENCODE ON
ON TABLE SET EMPTYREPORT ON
ON TABLE SET STYLE *
  INCLUDE=IBF:/CFG/FIILE/IBI_HTML_DIR/javaassist/intl/EN/ENIADefault_combine.sty,$
  TYPE=TABHEADING, LINE=1, JUSTIFY=CENTER, $
  TYPE=TABHEADING, LINE=1, ITEM=1, OBJECT=TEXT, FONT='ARIAL BLACK', SIZE=18, STYLE= BOLD,$
  TYPE=TABHEADING, LINE=2, ITEM=1, OBJECT=TEXT, SIZE=12, STYLE=BOLD,$
  TYPE=REPORT, OBJECT=STATUS-AREA,$
  TYPE=REPORT, OBJECT=Current-Row,$
  TYPE=REPORT, OBJECT=Calc-AREA,$
ENDSTYLE
END

-RUN
```

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Transferring Files From VM/CMS to your Desktop

You can download/transfer files from your mainframe VM/CMS account by using several methods. There is an easy way to transfer files from VM/CMS to your PC; the TRANSFER option available in Hummingbird Host Explorer which most of you use to gain access to VM/CMS.

From an open VM/CMS session click on Transfer>Receive File From Host... it will open a pop-up dialog box.

You will need to enter the VM/CMS Filename, Filetype, Filemode (in the central “Host Path” box), the Local path information (you can enter whichever drive you’d like or click on the folder to browse to it), and then finally change the top line “Scheme” to **CMS_Text**. It must always be **CMS_Text**. Next, click **Receive**.

This will not work if you are logged into FOCUS while on your mainframe VM/CMS account.
Re-creating VM/CMS Mainframe Focus Reports Using WebFOCUS

The transfer happens within seconds. You’ll see the green progress arrows race across the screen and you will receive a notice in the bottom right of the box that the process is done.

Then, using Windows Explorer I can find the file on my desktop where I can send it to a local printer if I desire.

NOTE: I always use a suffix of .txt so that the new file can be opened with Notepad or MS Word.

There is software that can be downloaded and installed to do this; it is called WS-FTP. Information about WS-FTP can be obtained by going to [http://mainframe.uconn.edu/vm-file-transfer-process](http://mainframe.uconn.edu/vm-file-transfer-process). It explains how to download and setup WS-FTP and how to download files using the software once you have installed it. Some people will not be able to download and install software on their PCs so the first option will be the best choice.

Once you have transferred the focexecs you would like to convert you may also want to transfer a copy of the Focus Master File. If you need an unencrypted version of any Focus Master File you will have to contact UITS Reporting Services, they will be able to provide it to you upon request.
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Attachment #1 – SLINFO FOCEXEC from VM/CMS

- *THIS REPORT CAN BE EDITED EASILY FOR LISTS
- *IN S/LS
DEFINE FILE D9501F15
FSID/A7 = FS19B|FS19C;
PROJD/D15.2M = FS949 + FS960;
ACCT/A6=FS005;
END
TABLE FILE D9501F15
HEADING CENTER
"SLINFO ON MOVEINV8"
"</2"
"&DATE </2"
SUM PROJD
BY FS005 AS ACCOUNT
BY FS066
BY FS042
BY FS142 AS ACCT-DESC
BY FS144 AS DESC-CONT
BY FSID
BY FS028
BY FS027
BY FS042 AS PROJECT
BY FS142 AS ACCT-DESC
WHERE FS042 CONTAINS 'OCIP'
END
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Attachment #2 – D9530F15 Subsidiary Ledger Master File – VM/CMS FOCUS

FILENAME=D9530F15, SUFFIX=FOC,$
SEGMNAME=ACCTSEG,SEGTYPE=S3,$
$*********************************************************************
$* USE Q9530F15 FOR FY 91 THRU 03  UAPFRSP.FY--.FSFLLY.D9530F15
$* USE R9530F15 FOR FY 04 THRU 08  UAPFRSP.FY--.FSFLLY.D9530F15
$* USE S9530F15 FOR FY 09 THRU 10  UAPFRSP.FY--.FSFLLY.D9530F15
$* USE D9530F15 FOR FY 11 THRU - --UAPFRSP.FY--.FSFLLY.D9530F15
$* and for the current file  UATFRSP.FSFL02.D9530F15
$*********************************************************************
$* FILENAME : D9530F15 MASTER   *
$* DESCRIPTION: FRS V3.0 SUBSIDIARY LEDGER FOCUS MASTER   *
$* MVS DSN   : UATFRSP.FSFL02.D9530F15                       *
$*
$* !!!!  NOTE:  !! ALL CHANGES MADE TO D953XF15 MUST ALSO BE MADE  *
$*      !! TO THIS FOCUS MASTER DESCRIPTION.                    *
$*
$* REVISIONS:
$*
$* 03/28/11 KAA SR11010/SP018  *
$*       FS233 tuition eligible   *
$* 01/19/11 KAA SR10015/fx041  *
$* REDEFINED FIELDS FOR OTHER USES   *
$*       FS251 proj_yr (pi_cost_share),  *
$*          filler (3 positions),     *
$*       FS25B (uc_e_verify)  *
$* 03/28/11 KAA SR11010/SP018  *
$* REDEFINED FIELDS FOR OTHER USES  *
$*       FS03C Constr_Stat TO B_G_Approval (FS03G),  *
$*           BOT_Approval (FS03H), and  *
$*           Payroll_reason_code (FS03I)  *
$* 11/20/09 KAA SR09016/SP016  *
$* REDEFINED FIELDS FOR OTHER USES  *
$*       FS078 FBM046_RESP_ROLLUP TO CO_PL_5_SAL_CST_SHR1,  *
$*       FS080 FM046_PGM_ROLLUP TO CO_PL_5_SAL_CST_SHR2,  *
$*       FS174 COMMENT1 TO CO_PL_1_SAL_CST_SHR1 (FS17E),  *
$*          AND CO_PL_1_SAL_CST_SHR2 (FS17F),  *
$*          AND CO_PL_2_SAL_CST_SHR1 (FS17G),  *
$*          AND CO_PL_2_SAL_CST_SHR2 (FS17H),  *
$*          AND CO_PL_3_SAL_CST_SHR1 (FS17I),  *
$*          AND CO_PL_3_SAL_CST_SHR2 (FS17J),  *
$*          AND CO_PL_4_SAL_CST_SHR1 (FS17K),  *
$*          AND CO_PL_4_SAL_CST_SHR2 (FS17L),  *
$*       FS286 COMMENT2 TO CO_PL_4_EFF_PCT_EMPL (FS28A),  *
$*          AND CO_PL_5_EFF_PCT_EMPL (FS28B),  *
$*       FS29J COST SHARING TO PL_SAL_COST_SHARE_1 (FS29R),  *
$*          AND COST_SHARE_ACCT_4(FS29K),  *

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$* FS29N PMS DOCUMENT NUMBER TO PI_SAL_COST_SHARE_2 (FS29S), *
$* AND COST_SHARE_ACCT_5 (FS29M) *
$* 04/14/09 KAA SR08807/FX038 AND SR09011/SYS104 *
$* ADDED PROJECT TYPE (FS03A), MOTHER CODE (FS03B), *
$* CONSTN STATUS (FS03C), REPORT CODE (FS03D), *
$* OWNER CODE (FS03E), ACCT TYPE (FS03F), PAY CODE (FS033), *
$* COMMENT1 (FS174), COMMENT2 (FS286), COMMENT3 (FS29P), *
$* COMMENT4 (FS140), COMMENT5 (FS097), COMMENT6 (FS240) *
$* 09/29/05 KAA SR04703/SYS056 REOPEN CO6160 *
$* ADDED CONTACT PHONE (FS10A) AS A GROUP ITEM *
$* 07/26/04 KAA SR04703/SYS056 *
$* ADDED TOTAL INDIRECT COST (FS09A), TOTAL DIRECT COST (FS09B), *
$* ACADEMIC DEPT (FS10L), ACADEMIC SCHOOL (FS10M), *
$* NONEXCHANGE (FS10N), CORE CT CODE (FS17A), *
$* PI EMAIL CODE (FS17B), AND SPONSOR NAME (FS19N) *
$* 09/24/98 CLT FRS V3.0 CONVERSION *
$* 01/24/96 DNK SWAPPED FUNIT, FCAMPUS SEGNAMES *
$* 07/25/95 CHANGED TITLES REQUESTED *
$* 03/07/95 CREATED SR# 94176 *
$* *
$* *********************************************************************
$* *********************************************************************
$* FRS PLUS VERSION OF D9530F15 *
$* SUBSIDIARY LEDGER *
$* *********************************************************************
$* ACCTSEG SEGMENT CONTAINING SECURITY DATA ELEMENTS *
$* FROM THE FSRTTBL DB2 TABLE *
$* *********************************************************************
FIELD=FS003_FSRT, ALIAS=FISCAL_YR, A2, A2, TITLE='FISCAL, YR', $
FIELD=FS004_FSRT, ALIAS=CAMPUS_CODE, A2, A2, TITLE='CAMPUS, CODE', $
FIELD=FS005_FSRT, ALIAS=ACCT_seg, A6, A6, FIELDTYPE=I, $
TITLE='SL, Account, Number', $
DEFINE PFRSACCT/A7=EDIT(FS005_FSRT, '9-9999');
$
GROUP=STATECODE, ALIAS=, A16, TITLE='STATE, CODE', FIELDTYPE=I, $
FIELD=FS19B_ALIAS=UC_OLD_FUND, A4, A4, $
TITLE='FUND', $
FIELD=FS19C_ALIAS=UC_OLD_SID, A3, A3, $
TITLE='SID', $
FIELD=FS074, ALIAS=ACCOUNT_PURPOSE, A2, A2, $
TITLE='Function', $
GROUP=FRSDEPT, ALIAS=UNIVDEPT_A7, $
FIELD=FS054_ALIAS=DEPARTMENT, A5, A5, $
TITLE='DEPARTMENT', $
FIELD=FS056_ALIAS=SUB_DEPARTMENT, A2, A2, $
TITLE='SUB, DEPARTMENT', $
FIELD=FS048_ALIAS=EXECUTIVE_LEVEL, A2, A2, $
TITLE='EXECUTIVE, LEVEL', $
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FIELD=FS050, ALIAS=DIVISION_SL, A2, A2, 
TITLE='DIVISION_SL' ,$
FIELD=FS052, ALIAS=SCHOOL, A2, A2, 
TITLE='SCHOOL' ,$
FIELD=FS066, ALIAS=FUND_GROUP, A2, A2, 
TITLE='FUND,GROUP' ,$
FIELD=FS088, ALIAS=SECURITY_CODE, A6, A6, 
TITLE='SECURITY,CODE' ,$
FIELD=FS042, ALIAS=ACCOUNT_DESC, A20, A20, 
TITLE='ACCOUNT,DESC' ,$
FIELD=FS19M, ALIAS=UC_EQUIP_OWNER, A1, A1, 
TITLE='Equipment,Ownership' ,$

$*********************************************************************
$* DESCSEG SEGMENT - UNIQUE - PARENT ACCTSEG SEGMENT *
$* CONTAINS DATA ELEMENTS FROM FSRTTBL, FSBDTBL AND FSPJTBL DB2 TABLE*
$*********************************************************************
SEGNAME=DESCSEG, SEGTYPE=U, PARENT=ACCTSEG,$

$*********************************************************************
$* REST OF FSRTTBL DB2 TABLE ELEMENTS *
$*********************************************************************
FIELD=FS027, ALIAS=DELETE_FLAG, A1, A1, 
TITLE='DELETE,FLAG' ,$
FIELD=FS028, ALIAS=FREEZE_FLAG, A1, A1, 
TITLE='FREEZE,FLAG' ,$
FIELD=FS029, ALIAS=REVIEW_FLAG, A1, A1, 
TITLE='REVIEW,FLAG' ,$
FIELD=FS031, ALIAS=SUPPRESS_BDGT_MSG, A1, A1, 
TITLE='SUPPRESS,BDGT,MSG' ,$
FIELD=FS032, ALIAS=ABR_FLAG, A1, A1, 
TITLE='ABR,FLAG' ,$
FIELD=FS033, ALIAS=PAY_CODE, A1, A1, 
TITLE='PAY,CODE' ,$
FIELD=FS034, ALIAS=GL_MAP_ACCOUNT, A5, A5, 
TITLE='GL,MAP,ACCOUNT' ,$
FIELD=FS03A, ALIAS=PROJECT_CODE, A3, A3, 
TITLE='PROJECT,CODE' ,$
FIELD=FS03B, ALIAS=MOTHER_CODE, A3, A3, 
TITLE='MOTHER,CODE' ,$
GROUP=FS03C, ALIAS=CONSTR_STATUS, A3, A3, 
TITLE='CONSTR,STATUS' ,$
FIELD=FS03G, ALIAS=B_G_APPROVAL, A1, A1, 
TITLE='BG,Approval' ,$
FIELD=FS03H, ALIAS=BOT_APPROVAL, A1, A1, 
TITLE='BOT,Approval' ,$
FIELD=FS03I, ALIAS=PAYROLL_REASON_CODE, A1, A1, 
TITLE='PAYROLL,REASON' ,$
FIELD=FS03D, ALIAS=REPORT_CODE, A3, A3, 
TITLE='REPORT,CODE' ,$
FIELD=FS03E, ALIAS=OWNER_CODE, A3, A3, 
TITLE='OWNER,CODE' ,$
FIELD=FS03F, ALIAS=ACCT_TYPE, A3, A3, 
TITLE='ACCT,TYPE' ,$

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FIELD=FS044, ALIAS=RESPONSIBLE_PERS, A20, A20,
TITLE='Responsible Person'
$FIELD=FS046, ALIAS=REPORT_DISTR, A5, A5,
TITLE='U-Box'
$FIELD=FS058, ALIAS=YEAR_END_PROC, A1, A1,
TITLE='YR,END,PROC'
$FIELD=FS060, ALIAS=ADDR, A20, A20,
TITLE='Bldg,Room,Location'
$FIELD=FS062, ALIAS=REVENUE_SOURCE, A4, A4,
TITLE='REVENUE,SOURCE'
$FIELD=FS064, ALIAS=EXPENSE_PURPOSE, A4, A4,
TITLE='EXPENSE,PURPOSE'
$***********************************************************************
$*THIS FIELDNAME IS PAYROLL_ID ON VM
$***********************************************************************
FIELD=FS068, ALIAS=AICPA_CODE, A6, A6,
TITLE='AICPA_CODE'
$FIELD=FS070, ALIAS=MAJOR_FUND_SOURCE, A2, A2,
TITLE='MAJOR,FUND,SOURCE'
$FIELD=FS072, ALIAS=MINOR_FUND_SOURCE, A3, A3,
TITLE='MINOR,FUND,SOURCE'
$FIELD=FS076, ALIAS=RECLASSIFICATION, A1, A1,
TITLE='RECLASSIFICATION'
$GROUP=FS078, ALIAS=FBM046_RESP_PERS, A6, A6,
TITLE=FBM046_RESP_PERS
$GROUP=FS080, ALIAS=FBM046_PROGRAM, A6, A6,
TITLE=FBM046_PROGRAM
$GROUP=FS086, ALIAS=FBM046_END_MONTH, A2, A2,
TITLE=FBM046_END_MONTH
$GROUP=FS087, ALIAS=PROJ_FYTD_END_MO, A2, A2,
TITLE=PROJ_FYTD_END_MO
$FIELD=FS088, ALIAS=LAST_CHG_ID, A6, A6,
TITLE='LAST,CHG,ID'
$FIELD=FS089, ALIAS=CREATE_DT, YYMD, DATE,
TITLE='CREATE,DT'
$FIELD=FS095, ALIAS=LAST_ATTR_CHG_DT, YYMD, DATE,
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TITLE="LAST,ATTR,CHG,DT' ,$
FIELD=FS097 ,ALIAS=COMMENT5 ,A20 ,A20 ,
TITLE=COMMENT5' ,$
GROUP=FS10A ,ALIAS=CONTACTPHONE ,A10 ,TITLE=CONTACTPHONE' ,$
FIELD=FS10B ,ALIAS=UC_TELEPHONE_AREA ,A3 ,A3 ,
TITLE=UC_TELEPHONE_AREA' ,$
FIELD=FS10D ,ALIAS=UC_TEL_FIRST_3 ,A3 ,A3 ,
TITLE=UC_TEL_FIRST_3' ,$
FIELD=FS10E ,ALIAS=UC_TEL_LAST_4 ,A4 ,A4 ,
TITLE=UC_TEL_LAST_4' ,$
FIELD=FS10F ,ALIAS=UC_MEMO_BANK_ACCT ,A2 ,A2 ,
TITLE=UC_MEMO_BANK_ACCT' ,$
FIELD=FS10G ,ALIAS=UC_NEW_FRS_ACCT ,A6 ,A6 ,
TITLE=UC_NEW_FRS_ACCT' ,$
FIELD=FS10H ,ALIAS=UC_ASSGNND_TO_CODE ,A3 ,A3 ,
TITLE=UC_ASSGNND_TO_CODE' ,$
FIELD=FS10I ,ALIAS=UC_OLD_SL_ACCT_NBR ,A6 ,A6 ,
TITLE=UC_OLD_SL_ACCT_NBR' ,$
FIELD=FS10J ,ALIAS=UC_TOTAL_IND_COST ,A12 ,A12 ,
TITLE=UC_TOTAL_INDIRECT_COST' ,$
FIELD=FS10K ,ALIAS=UC_TOTAL_DIR_COST ,A12 ,A12 ,
TITLE=UC_TOTAL_DIRECT_COST' ,$
FIELD=FS10L ,ALIAS=UC_ACADEMIC_DEPT ,A5 ,A5 ,
TITLE=UC_ACADEMIC_DEPT' ,$
FIELD=FS10M ,ALIAS=UC_ACADEMIC_SCHOOL ,A2 ,A2 ,
TITLE=UC_ACADEMIC_SCHOOL' ,$
FIELD=FS10N ,ALIAS=UC_NONEXCHANGE ,A2 ,A2 ,
TITLE=UC_NONEXCHANGE' ,$
TITLE='FSBDTBL DB2 TABLE ELEMENTS'  

FIELDF=FS103_FSBD ,ALIAS=FISCAL_YR ,A2 ,A2 ,
TITLE=FISCAL_YR' ,$
FIELD=FS104_FSBD ,ALIAS=CAMPUS_CODE ,A2 ,A2 ,
TITLE=CAMPUS_CODE' ,$
FIELD=FS105_FSBD ,ALIAS=ACCOUNT_NUM ,A6 ,A6 ,
TITLE=ACCOUNT_NUM' ,$
FIELD=FS127 ,ALIAS=DELETE_FLAG ,A1 ,A1 ,
TITLE=DELETE_FLAG' ,$
FIELD=FS128 ,ALIAS=FREEZE_FLAG ,A1 ,A1 ,
TITLE=FREEZE_FLAG' ,$
FIELD=FS129 ,ALIAS=REVIEW_FLAG ,A1 ,A1 ,
TITLE=REVIEW_FLAG' ,$
FIELD=FS131 ,ALIAS=SUPPRESS_BDGT_MSG ,A1 ,A1 ,
TITLE=SUPPRESS_BDGT_MSG' ,$
FIELD=FS132 ,ALIAS=ABR_FLAG ,A1 ,A1 ,
TITLE=ABR_FLAG' ,$
FIELD=FS134 ,ALIAS=LONG_DESC_A ,A40 ,A40 ,
TITLE=LONG_DESC_A'  

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TITLE='LONG,DESC,A'               ,$  
FIELD=FS144          ALIAS=LONG_DESC_B ,A40 ,A40 ,  
TITLE='LONG,DESC,B'               ,$  
FIELD=FS158          ALIAS=BLDG_NUM ,A5 ,A5 ,  
TITLE='BLDG.NUM'               ,$  
FIELD=FS160          ALIAS=BLDG_SQUARE_FT ,A6 ,A6 ,  
TITLE='BLDG,SQUARE,FT'               ,$  
FIELD=FS162          ALIAS=DT_IN_SERVICE ,YYMD ,DATE ,  
TITLE='DT,IN,SERVICE'               ,$  
FIELD=FS164          ALIAS=DT_OF_RENOVATION ,YYMD ,DATE ,  
TITLE='DT,OF,RENOVATION'               ,$  
FIELD=FS166          ALIAS=BLDG_ORIG_COST ,A9 ,A9 ,  
TITLE='BLDG,ORIG,COST'               ,$  
FIELD=FS168          ALIAS=AGENCY ,A7 ,A7 ,  
TITLE='AGENCY'               ,$  
GROUP=FS174          ALIAS=COMMENT1       ,A60 ,A60 ,  
TITLE='COMMENT1'               ,$  
FIELD=FS17E          ALIAS=CO_PI_1_SAL_CST_SHR1,A6 ,A6 ,  
TITLE='CO PI 1, SAL, CST SHR1'               ,$  
FIELD=FS17F          ALIAS=CO_PI_1_SAL_CST_SHR2,A6 ,A6 ,  
TITLE='CO PI 1, SAL, CST SHR2'               ,$  
FIELD=FS17G          ALIAS=CO_PI_2_SAL_CST_SHR1,A6 ,A6 ,  
TITLE='CO PI 2, SAL, CST SHR1'               ,$  
FIELD=FS17H          ALIAS=CO_PI_2_SAL_CST_SHR2,A6 ,A6 ,  
TITLE='CO PI 2, SAL, CST SHR2'               ,$  
FIELD=FS17I          ALIAS=CO_PI_3_SAL_CST_SHR1,A6 ,A6 ,  
TITLE='CO PI 3, SAL, CST SHR1'               ,$  
FIELD=FS17J          ALIAS=CO_PI_3_SAL_CST_SHR2,A6 ,A6 ,  
TITLE='CO PI 3, SAL, CST SHR2'               ,$  
FIELD=FS17K          ALIAS=CO_PI_4_SAL_CST_SHR1,A6 ,A6 ,  
TITLE='CO PI 4, SAL, CST SHR1'               ,$  
FIELD=FS17L          ALIAS=CO_PI_4_SAL_CST_SHR2,A6 ,A6 ,  
TITLE='CO PI 4, SAL, CST SHR2'               ,$  
FIELD=FILL1          ALIAS=FILLER1, A12,A12,  
TITLE='FILLER'               ,$  
FIELD=FS19F          ALIAS=UC_FRNG_BEN_EXMPT ,A1 ,A1 ,  
TITLE='Fringe,Exempt,Acct'               ,$  
FIELD=FS19J          ALIAS=UC_SPEC_ACCT_IND ,A1 ,A1 ,  
TITLE='UC,SPEC,ACCT,IND'               ,$  
FIELD=FS17A          ALIAS=UC_CORE_CT_CODE ,A10,A10 ,  
TITLE='UC,CORE,CT,CODE'               ,$  
FIELD=FS17B          ALIAS=UC_PI_EMAIL_CODE ,A4 ,A4 ,  
TITLE='UC,PI,EMAIL,CODE'               ,$  
FIELD=FS19N          ALIAS=UC_SPONSOR_NAME ,A50,A50 ,  
TITLE='UC,SPONSOR,NAME'               ,$  
$***********************************************************************  
$  FSPJTBL DB2 TABLE ELEMENTS  
$***********************************************************************  
FIELD=FS203          ALIAS=FISCAL_YR ,A2 ,A2 ,  
TITLE='FISCAL_YR'               ,$  
FIELD=FS204          ALIAS=CAMPUS_CODE ,A2 ,A2 ,  
TITLE='CAMPUS,CODE'               ,$
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FIELD=FS205_FSPJ ,ALIAS=ACCOUNT_NUM ,A6 ,A6 ,
TITLE='ACCOUNT,NUM' ,$
FIELD=FS227 ,ALIAS=DELETE_FLAG ,A1 ,A1 ,
TITLE='DELETE,FLAG' ,$
FIELD=FS228 ,ALIAS=FREEZE_FLAG ,A1 ,A1 ,
TITLE='FREEZE,FLAG' ,$
FIELD=FS229 ,ALIAS=REVIEW_FLAG ,A1 ,A1 ,
TITLE='REVIEW,FLAG' ,$
FIELD=FS231 ,ALIAS=SUPPRESS_BDGT.MSG ,A1 ,A1 ,
TITLE='SUPPRESS,BDGT,MSG' ,$
FIELD=FS232 ,ALIAS=ABR_FLAG ,A1 ,A1 ,
TITLE='ABR,FLAG' ,$
FIELD=FS233 ,ALIAS=TUIT_ELIG,A1 ,A1 ,
TITLE='TUIT,ELIG' ,$
FIELD=FS234 ,ALIAS=GL_MAP_ACCOUNT ,A5 ,A5 ,
TITLE='GL,MAP,ACCOUNT' ,$
FIELD=FS240 ,ALIAS=COMMENT6 ,A23,A23,
TITLE='COMMENT6' ,$
FIELD=FS242 ,ALIAS=TYPE_OF_FUNDING ,A2 ,A2 ,
TITLE='Letter,of,Credit,Indicator' ,$
FIELD=FS244 ,ALIAS=TYPE_OF_RESEARCH ,A2 ,A2 ,
TITLE='TYPE,OF,RESEARCH' ,$
FIELD=FS246 ,ALIAS=GRANT_CNTRCT_IND ,A1 ,A1 ,
TITLE='Grants,Dept,Indicator' ,$
FIELD=FS248 ,ALIAS=RESEARCH_PURPOSE ,A2 ,A2 ,
TITLE='Research,Fnd,Budget,Type' ,$
FIELD=FS250 ,ALIAS=DESIGNATION ,A1 ,A1 ,
TITLE='DESIGNATION' ,$
GROUP=FS251 ,ALIAS=PROJ_YR ,A4 ,A4 ,
TITLE='PI,Cost,Share' ,$
FIELD=FIELD1 ,ALIAS=FILLER1,A3 ,A3 ,
TITLE='Filler1' ,$
FIELD=FS25B ,ALIAS=e_VERIFY,A1 ,A1 ,
TITLE='eVERIFY' ,$
FIELD=FS252 ,ALIAS=FIELD_OF_SCIENCE ,A1 ,A1 ,
TITLE='FIELD,OF,SCIENCE' ,$
FIELD=FS254 ,ALIAS=STATUS_SL ,A1 ,A1 ,
TITLE='STATUS,SL' ,$
FIELD=FS256 ,ALIAS=PRINCIPAL_INVESTIG ,A4 ,A4 ,
TITLE='PRINCIPAL,INVESTIG' ,$
FIELD=FS258 ,ALIAS=SPONSOR ,A4 ,A4 ,
TITLE='SPONSOR' ,$
FIELD=FS260 ,ALIAS=SPONSOR_AWARD_NUM ,A4 ,A4 ,
TITLE='SPONSOR,AWARD,NUM' ,$
FIELD=FS262 ,ALIAS=FED_OR_STATE_ID ,A12 ,A12 ,
TITLE='FED,OR,STATE,ID' ,$
FIELD=FS264 ,ALIAS=PROPOSAL_NUM ,A10 ,A10 ,
TITLE='PROPOSAL,NUM' ,$
FIELD=FS268 ,ALIAS=OVERHEAD_BASE ,A1 ,A1 ,
TITLE='OVERHEAD,BASE' ,$
FIELD=FS270 ,ALIAS=OVERHEAD_RATE ,A4 ,A4 ,
TITLE='OVERHEAD,RATE' ,

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```
TITLE=’CAMPUS,CODE’                       ,$
GROUP=FRSACCOUNT, ALIAS= , A10, FIELDTYPE=I,
TITLE=’ACCOUNT,NUMBER’                      ,$
FIELD=FS905_FSDL ,ALIAS=ACCOUNT_NUM, A6,A6,
TITLE=’ACCOUNT,NUM’                      ,$
FIELD=FS914_FSDL ,ALIAS=SUBCODE, A4,A4,
TITLE=’SUBCODE’                       ,$

DEFINE PFRSACCOUNT/A12=EDIT(FRSACCOUNT,’9-99999-9999’);
DEFINE MAJSUB/A1=EDIT(SUBCODE,’9$$$’);

$*************************************************
*               DOLLARS SEGMENT - UNIQUE - PARENT SUBSEG          *
* REST OF DATA ELEMENTS LOCATED IN FSDLTBL DB2 TABLE          *
$*************************************************
SEGNAME=DOLLARS,SEGTYPE=U, PARENT=SUBSEG, $
FIELD=FS927 ,ALIAS=DELETE_FLAG ,A1,A1 ,
TITLE=’DELETE,FLAG’                       ,$
FIELD=FS928 ,ALIAS=FREEZE_FLAG ,A1,A1 ,
TITLE=’FREEZE,FLAG’                       ,$
FIELD=FS929 ,ALIAS=REVIEW_FLAG ,A1,A1 ,
TITLE=’REVIEW,FLAG’                       ,$
FIELD=FS931 ,ALIAS=SUPPRESS_BDGT_MSG ,A1,A1 ,
TITLE=’SUPPRESS,BDGT,MSG’                  ,$
FIELD=FS932 ,ALIAS=ABR_FLAG ,A1,A1 ,
TITLE=’ABR,FLAG’                          ,$
FIELD=FS934 ,ALIAS=GL_MAP_ACCOUNT ,A5,A5 ,
TITLE=’GL,MAP,ACCOUNT’                    ,$
FIELD=FS942 ,ALIAS=DOLLAR_DESC ,A20,A20 ,
TITLE=’DOLLAR,DESC’                        ,$
FIELD=FS944 ,ALIAS=ORIG_BUDGET ,D14.2M ,
TITLE=’ORIG,BUDGET’                       ,$
FIELD=FS945 ,ALIAS=ABR_BUDGET ,D14.2M ,
TITLE=’ABR,BUDGET’                        ,$
FIELD=FS946 ,ALIAS=ANNUAL_BUDGET ,D14.2M ,
TITLE=’ANNUAL,BUDGET’                     ,$
FIELD=FS947 ,ALIAS=PAST_BUDGET ,D14.2M ,
TITLE=’PAST,BUDGET’                       ,$
FIELD=FS948 ,ALIAS=FUTURE_BUDGET ,D14.2M ,
TITLE=’FUTURE,BUDGET’                     ,$
FIELD=FS949 ,ALIAS=CM_ACTUAL ,D14.2M ,
TITLE=’CM,ACTUAL’                         ,$
FIELD=FS960 ,ALIAS=YTD_ACTUAL ,D14.2M ,
TITLE=’YTD,ACTUAL’                        ,$
FIELD=FS962 ,ALIAS=PTD_ACTUAL ,D14.2M ,
TITLE=’PTD,ACTUAL’                        ,$
FIELD=FS963 ,ALIAS=ENCUMBRANCES ,D14.2M ,
TITLE=’ENCUMBRANCES’                      ,$
FIELD=FS964 ,ALIAS=REQUISITIONS ,D14.2M ,
TITLE=’REQUISITIONS’                      ,$
FIELD=FS965 ,ALIAS=BUDGET_BAL_AVAIL ,D14.2M ,
TITLE=’BUDGET,BAL,AVAIL’                  ,$
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FIELD=FS966 ,ALIAS=PRIOR_CM_ACTUAL ,D14.2M ,
TITLE='PRIOR,CM,ACTUAL'        ,$
FIELD=FS967 ,ALIAS=PRIOR_YTD_ACTUAL ,D14.2M ,
TITLE='PRIOR,YTD,ACTUAL'        ,$
FIELD=FS968 ,ALIAS=LAST_YR_ACTUAL ,D14.2M ,
TITLE='LAST,YR,ACTUAL'         ,$
FIELD=FS970 ,ALIAS=QTD1_ACTUAL ,D14.2M ,
TITLE=QTD1,ACTUAL'            ,$
FIELD=FS971 ,ALIAS=QTD2_ACTUAL ,D14.2M ,
TITLE=QTD2,ACTUAL'            ,$
FIELD=FS972 ,ALIAS=QTD3_ACTUAL ,D14.2M ,
TITLE=QTD3,ACTUAL'            ,$
FIELD=FS973 ,ALIAS=QTD4_ACTUAL ,D14.2M ,
TITLE=QTD4,ACTUAL'            ,$
FIELD=FS974 ,ALIAS=PROJ_FYTD_ACTUAL ,D14.2M ,
TITLE=PROJ,FYTD,ACTUAL'       ,$
FIELD=FS975 ,ALIAS=TC_080_AMT ,D14.2M ,
TITLE=TC,080,AMT'              ,$
FIELD=FS976 ,ALIAS=TC_081_AMT ,D14.2M ,
TITLE=TC,081,AMT'              ,$
FIELD=FS977 ,ALIAS=TC_082_AMT ,D14.2M ,
TITLE=TC,082,AMT'              ,$
FIELD=FS978 ,ALIAS=TC_083_AMT ,D14.2M ,
TITLE=TC,083,AMT'              ,$
FIELD=FS979 ,ALIAS=CM_ORIG_BUDGET ,D14.2M ,
TITLE=CM,ORIG,BUDGET'         ,$
FIELD=FS980 ,ALIAS=CM_REVISED_BUDGET ,D14.2M ,
TITLE=CM,REVISED,BUDGET'      ,$
FIELD=FS981 ,ALIAS=YTD_ORIG_BUDGET ,D14.2M ,
TITLE=YTD,ORIG,BUDGET'        ,$
FIELD=FS982 ,ALIAS=YTD_REVISED_BUDGET ,D14.2M ,
TITLE=YTD,REVISED,BUDGET'     ,$
FIELD=FS983 ,ALIAS=STATE_OBJ_CODE ,A6 ,A6 ,
TITLE=STATE,OBJ,CODE'        ,$
FIELD=FS997 ,ALIAS=DT_OF_LAST_ACTV ,YYMD ,DATE ,
TITLE=DT,OF,LAST,ACTV'       ,$
FIELD=FS998 ,ALIAS=MONTHLY_ACTV_CNTR ,I9 ,I4 ,
TITLE=MONTHLY,ACTV,CNTR'     ,$
$ $ DEFINE PYTD_ACTUAL/D14.2M=FS949 + FS960; 
DEFINE COMMIT/D14.2M=FS963 + FS964; 
DEFINE PPROJ_FYTD/D14.2M=FS949 + FS974; 
DEFINE PER_USED/I3=100*((FS946 - FS965)/FS946); 
$ $*********************************************************************
$*           CROSS REFERENCES TO D9530F15 USING D9530F13 FILE        *
$*********************************************************************

SEGNAME=FDEPT, PARENT=ACCTSEG, SECTYPE=DKU, CRFILE=D9530F13, 
CRKEY=DEPARTMENT, $ 

SEGNAME=FSUBDEPT, PARENT=ACCTSEG, SECTYPE=DKU, CRFILE=D9530F13, 

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CRKEY=SUB_DEPARTMENT, $

SEGNAME=FEXECLEVEL, PARENT=ACCTSEG, SEGTYPE=DKU, CRFILE=D9530F13, CRKEY=EXECUTIVE_LEVEL, $

SEGNAME=FUNCNT, PARENT=ACCTSEG, SEGTYPE=DKU, CRFILE=D9530F13, CRKEY=SCHOOL, $

SEGNAME=FCAMPUS, PARENT=ACCTSEG, SEGTYPE=DKU, CRFILE=D9530F13, CRKEY=DIVISION_SL, $

SEGNAME=YEarend, PARENT=DESCSEG, SEGTYPE=DKU, CRFILE=D9530F13, CRKEY=YR_END_PROC, $

SEGNAME=FUNCTION, PARENT=ACCTSEG, SEGTYPE=DKU, CRFILE=D9530F13, CRKEY=ACCOUNT_PURPOSE, $

END
Attachment #3

The WebFOCUS version of the Master File Description for the same file, D9530f15_historical_subsidary_ledger.MAS

```sql
FILENAME=d9530f15_historical_subsidary_ledger, SUFFIX=SQLORA , $ SEGMENT=FRS_FYSL1, SEGTYPE=S0, $  
  FIELDNAME=FISCAL_YR, ALIAS=FISCAL_YR, USAGE=A2V, ACTUAL=A2V, $  
  FIELDNAME=CAMPUS_CODE, ALIAS=CAMPUS_CODE, USAGE=A2V, ACTUAL=A2V, $  
  FIELDNAME=ACCOUNT_NUM, ALIAS=ACCOUNT_NUM, USAGE=A6V, ACTUAL=A6V, $  
  FIELDNAME=STATECODE, ALIAS=STATECODE, USAGE=A16V, ACTUAL=A16V, $  
  FIELDNAME=UC_OLD_FUND, ALIAS=UC_OLD_FUND, USAGE=A4V, ACTUAL=A4V, $  
  FIELDNAME=ACCOUNT_PURPOSE, ALIAS=ACCOUNT_PURPOSE, USAGE=A2V, ACTUAL=A2V, $  
  FIELDNAME=UNIVDEPT, ALIAS=UNIVDEPT, USAGE=A7V, ACTUAL=A7V, $  
  FIELDNAME=DIVISION_SL, ALIAS=DIVISION_SL, USAGE=A2V, ACTUAL=A2V, $  
  FIELDNAME=ACCOUNT_DESC, ALIAS=ACCOUNT_DESC, USAGE=A20V, ACTUAL=A20V, $  
  DEFINE PFRSACCT/A7=EDIT(ACCOUNT_NUM,'9-99999'); $  
SEGMENT=FRS_FYSL2, SEGTYPE=S0, SEGSUF=SQLORA , PARENT=FRS_FYSL1, JOIN_WHERE=FRS_FYSL1.FISCAL_YR EQ FRS_FYSL2.FISCAL_YR AND FRS_FYSL1.CAMPUS_CODE EQ FRS_FYSL2.CAMPUS_CODE AND FRS_FYSL1.ACCOUNT_NUM EQ FRS_FYSL2.ACCOUNT_NUM; $  
  FIELDNAME=FISCAL_YR, ALIAS=FISCAL_YR, USAGE=A2V, ACTUAL=A2V, $  
  FIELDNAME=CAMPUS_CODE, ALIAS=CAMPUS_CODE, USAGE=A2V, ACTUAL=A2V, $  
  FIELDNAME=ACCOUNT_NUM, ALIAS=ACCOUNT_NUM, USAGE=A6V, ACTUAL=A6V, $  
  FIELDNAME=DELETE_FLAG_FS027, ALIAS=DELETE_FLAG_FS027, USAGE=A1V, ACTUAL=A1V, $  
  FIELDNAME=FREEZE_FLAG_FS028, ALIAS=FREEZE_FLAG_FS028, USAGE=A1V, ACTUAL=A1V, $  
  FIELDNAME=REPORT_CODE, ALIAS=REPORT_CODE, USAGE=A3V, ACTUAL=A3V, $  
  FIELDNAME=OWNER_CODE, ALIAS=OWNER_CODE, USAGE=A3V, ACTUAL=A3V, $  
  define=b_g_approval, alias=b_g_approval, usage=a1v, actual=a1v, $  
  define=bot_approval, alias=bot_approval, usage=a1v, actual=a1v, $  
  define=payroll_reason_code, alias=payroll_reason_code, usage=a1v, actual=a1v, $  
  define=report_code, alias=report_code, usage=a3v, actual=a3v, $  
  define=owner_code, alias=owner_code, usage=a3v, actual=a3v, $  
  define=acct_type, alias=acct_type, usage=a3v, actual=a3v, $  
```

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FIELDNAME=RESPONSIBLE_, ALIAS=RESPONSIBLE_, USAGE=A20V, ACTUAL=A20V, $
FIELDNAME=REPORT_DISTR, ALIAS=REPORT_DISTR, USAGE=A5V, ACTUAL=A5V, $
FIELDNAME=YEAR_END_PROC, ALIAS=YEAR_END_PROC, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=ADDR, ALIAS=ADDR, USAGE=A20V, ACTUAL=A20V, $
FIELDNAME=REVENUE_SOURCE, ALIAS=REVENUE_SOURCE, USAGE=A4V, ACTUAL=A4V, $
FIELDNAME=EXPENSE_PURPOSE, ALIAS=EXPENSE_PURPOSE, USAGE=A4V, ACTUAL=A4V, $
FIELDNAME=INCOME_CODE, ALIAS=INCOME_CODE, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=MAJOR_FUND_SOURCE, ALIAS=MAJOR_FUND_SOURCE, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=MINOR_FUND_SOURCE, ALIAS=MINOR_FUND_SOURCE, USAGE=A3V, ACTUAL=A3V, $
FIELDNAME=RECLASSIFICATION, ALIAS=RECLASSIFICATION, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=FBM046_RESP_PERS, ALIAS=FBM046_RESP_PERS, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=CO_PI_5_SAL_CST_SHR1, ALIAS=CO_PI_5_SAL_CST_SHR1, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=FBM046_PROGRAM, ALIAS=FBM046_PROGRAM, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=QTD1_END_MONTH, ALIAS=QTD1_END_MONTH, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=QTD2_END_MONTH, ALIAS=QTD2_END_MONTH, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=QTD3_END_MONTH, ALIAS=QTD3_END_MONTH, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=QTD4_END_MONTH, ALIAS=QTD4_END_MONTH, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=PROJ_FYTD_END_MO, ALIAS=PROJ_FYTD_END_MO, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=PO_AUTH_PERS_1, ALIAS=PO_AUTH_PERS_1, USAGE=A9V, ACTUAL=A9V, $
FIELDNAME=PO_AUTH_PERS_2, ALIAS=PO_AUTH_PERS_2, USAGE=A9V, ACTUAL=A9V, $
FIELDNAME=PO_AUTH_PERS_3, ALIAS=PO_AUTH_PERS_3, USAGE=A9V, ACTUAL=A9V, $
FIELDNAME=LAST_CHG_ID, ALIAS=LAST_CHG_ID, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=CREATE_DT, ALIAS=CREATE_DT, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=LAST_ATTR_CHG_DT, ALIAS=LAST_ATTR_CHG_DT, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=COMMENT5, ALIAS=COMMENT5, USAGE=A20V, ACTUAL=A20V, $
FIELDNAME=CONTACTPHONE, ALIAS=CONTACTPHONE, USAGE=A10V, ACTUAL=A10V, $
FIELDNAME=UC_TELEPHONE_AREA, ALIAS=UC_TELEPHONE_AREA, USAGE=A3V, ACTUAL=A3V, $
FIELDNAME=UC_TEL_FIRST_3, ALIAS=UC_TEL_FIRST_3, USAGE=A3V, ACTUAL=A3V, $
FIELDNAME=UC_TEL_LAST_4, ALIAS=UC_TEL_LAST_4, USAGE=A4V, ACTUAL=A4V, $
FIELDNAME=UC_MEMO_BANK_ACCT, ALIAS=UC_MEMO_BANK_ACCT, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=UC_NEW_FRS_ACCT, ALIAS=UC_NEW_FRS_ACCT, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=UC_ASSGN_TO_CODE, ALIAS=UC_ASSGN_TO_CODE, USAGE=A3V, ACTUAL=A3V, $
FIELDNAME=UC_OLD_SL_ACCT_NBR, ALIAS=UC_OLD_SL_ACCT_NBR, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=UC_TOTAL_IND_COST, ALIAS=UC_TOTAL_IND_COST, USAGE=A12V, ACTUAL=A12V, $
FIELDNAME=UC_TOTAL_DIR_COST, ALIAS=UC_TOTAL_DIR_COST, USAGE=A12V, ACTUAL=A12V, $
FIELDNAME=UC_ACADEMIC_DEPT, ALIAS=UC_ACADEMIC_DEPT, USAGE=A5V, ACTUAL=A5V, $
FIELDNAME=UC_ACADEMIC_SCHOOL, ALIAS=UC_ACADEMIC_SCHOOL, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=UC_NONEXCHANGE, ALIAS=UC_NONEXCHANGE, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=FISCAL_YR_FS103_FSB, ALIAS=FISCAL_YR_FS103_FSB, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=CAMPUS_CODE_FS104_FSB, ALIAS=CAMPUS_CODE_FS104_FSB, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=ACCOUNT_NUM_FS105_FSB, ALIAS=ACCOUNT_NUM_FS105_FSB, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=DELETE_FLAG_FS127, ALIAS=DELETE_FLAG_FS127, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=FREEZE_FLAG_FS128, ALIAS=FREEZE_FLAG_FS128, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=REVIEW_FLAG_FS129, ALIAS=REVIEW_FLAG_FS129, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=SUPPRESS_BDGT_MSG_FS129, ALIAS=SUPPRESS_BDGT_MSG_FS129, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=ABR_FLAG2, ALIAS=ABR_FLAG2, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=GL_MAP_ACCOUNT_FS134, ALIAS=GL_MAP_ACCOUNT_FS134, USAGE=A5V, ACTUAL=A5V, $
FIELDNAME=COMMENT4, ALIAS=COMMENT4, USAGE=A23V, ACTUAL=A23V, $
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FIELDNAME=LONG_DESC_A, ALIAS=LONG_DESC_A, USAGE=A40V, ACTUAL=A40V, $
FIELDNAME=BLDG_NUM, ALIAS=BLDG_NUM, USAGE=A5V, ACTUAL=A5V, $
FIELDNAME=BLDG_SQUARE_FT, ALIAS=BLDG_SQUARE_FT, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=DT_IN_SERVICE, ALIAS=DT_IN_SERVICE, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=DT_OF_RENOVATION, ALIAS=DT_OF_RENOVATION, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=BLDG_ORIG_COST, ALIAS=BLDG_ORIG_COST, USAGE=A9V, ACTUAL=A9V, $
FIELDNAME=AGENCY, ALIAS=AGENCY, USAGE=A7V, ACTUAL=A7V, $
FIELDNAME=COMMENT1, ALIAS=COMMENT1, USAGE=A60V, ACTUAL=A60V, $
FIELDNAME=CO_PI_1_SAL_CST_SHR1, ALIAS=CO_PI_1_SAL_CST_SHR1, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=CO_PI_1_SAL_CST_SHR2, ALIAS=CO_PI_1_SAL_CST_SHR2, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=UC_FRNG_BEN_EXMPT, ALIAS=UC_FRNG_BEN_EXMPT, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=UC_SPEC_ACCT_IND, ALIAS=UC_SPEC_ACCT_IND, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=UC_CORE_CT_CODE, ALIAS=UC_CORE_CT_CODE, USAGE=A10V, ACTUAL=A10V, $
FIELDNAME=UC_PI_EMAIL_CODE, ALIAS=UC_PI_EMAIL_CODE, USAGE=A4V, ACTUAL=A4V, $
FIELDNAME=UC_SPONSOR_NAME, ALIAS=UC_SPONSOR_NAME, USAGE=A50V, ACTUAL=A50V, $
FIELDNAME=FISCAL_YR_FS203_FSPJ, ALIAS=FISCAL_YR_FS203_FSPJ, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=CAMPUS_CODE_FS204_FSPJ, ALIAS=CAMPUS_CODE_FS204_FSPJ, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=ACCOUNT_NUM_FS205_FSPJ, ALIAS=ACCOUNT_NUM_FS205_FSPJ, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=DELETE_FLAG_FS227, ALIAS=DELETE_FLAG_FS227, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=FREEZE_FLAG_FS228, ALIAS=FREEZE_FLAG_FS228, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=REVIEW_FLAG_FS229, ALIAS=REVIEW_FLAG_FS229, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=ACCOUNT_NUM_FS234, ALIAS=ACCOUNT_NUM_FS234, USAGE=A5V, ACTUAL=A5V, $
FIELDNAME=TYPE_OF_FUNDING, ALIAS=TYPE_OF_FUNDING, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=TYPE_OF_RESEARCH, ALIAS=TYPE_OF_RESEARCH, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=GRANT_CNTRCT_IND, ALIAS=GRANT_CNTRCT_IND, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=RESEARCH_PURPOSE, ALIAS=RESEARCH_PURPOSE, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=DESIGNATION, ALIAS=DESIGNATION, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=STATUS_SL, ALIAS=STATUS_SL, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=PRINCIPAL_INVESTIG, ALIAS=PRINCIPAL_INVESTIG, USAGE=A4V, ACTUAL=A4V, $
FIELDNAME=SPONSOR_AWARD_NUM, ALIAS=SPONSOR_AWARD_NUM, USAGE=A4V, ACTUAL=A4V,
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FIELDNAME=OVERHEAD_BASE, ALIAS=OVERHEAD_BASE, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=OVERHEAD_RATE, ALIAS=OVERHEAD_RATE, USAGE=A4V, ACTUAL=A4V, $
FIELDNAME=REPORTING_FREQ, ALIAS=REPORTING_FREQ, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=START_DT, ALIAS=START_DT, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=END_DT, ALIAS=END_DT, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=TECH_REPORT_DT, ALIAS=TECH_REPORT_DT, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=FISCAL_REPORT_DT, ALIAS=FISCAL_REPORT_DT, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=INVEN_REPORT_DT, ALIAS=INVEN_REPORT_DT, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=RENEWAL_REPORT_DT, ALIAS=RENEWAL_REPORT_DT, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=COMMENT2, ALIAS=COMMENT2, USAGE=A60V, ACTUAL=A60V, $
FIELDNAME=CO_PI_4_EFF_PCT_EMPL, ALIAS=CO_PI_4_EFF_PCT_EMPL, USAGE=A9V, ACTUAL=A9V, $
FIELDNAME=CO_PI_5_EFF_PCT_EMPL, ALIAS=CO_PI_5_EFF_PCT_EMPL, USAGE=A9V, ACTUAL=A9V, $
FIELDNAME=FILLER3, ALIAS=FILLER3, USAGE=A42V, ACTUAL=A42V, $
FIELDNAME=UC_SPONS_ID_NUM, ALIAS=UC_SPONS_ID_NUM, USAGE=A20V, ACTUAL=A20V, $
FIELDNAME=UC_FED_CAT_NUM, ALIAS=UC_FED_CAT_NUM, USAGE=A8V, ACTUAL=A8V, $
FIELDNAME=UC_CONTING_POOL, ALIAS=UC_CONTING_POOL, USAGE=A9V, ACTUAL=A9V, $
FIELDNAME=UC_COST_SHARE, ALIAS=UC_COST_SHARE, USAGE=A12V, ACTUAL=A12V, $
FIELDNAME=PL_SAL_COST_SHARE1, ALIAS=PL_SAL_COST_SHARE1, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=STREASURE_A1, ALIAS=STREASURE_A1, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=COMMENT3, ALIAS=COMMENT3, USAGE=A31V, ACTUAL=A31V, $
DEFINE PFRSACCOUNT/A12=EDIT(ACCOUNT_NUM_FS905_FSDL,'9-99999')|'-'|SUBCODE; $
DEFINE MAJSUB/A1=EDIT(SUBCODE,'9$$$'); $
FIELDNAME=FISCAL_YR, ALIAS=FISCAL_YR, USAGE=A2V, ACTUAL=A2V, $
FIELDNAME=ACCOUNT_NUM, ALIAS=ACCOUNT_NUM, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=DELETE_FLAG, ALIAS=DELETE_FLAG, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=SUBCODE, ALIAS=SUBCODE, USAGE=A4V, ACTUAL=A4V, $
DEFINE PFRSACCOUNT/A12=EDIT(ACCOUNT_NUM_FS905_FSDL,'9-99999')|'-'|SUBCODE; $
DEFINE MAJSUB/A1=EDIT(SUBCODE,'9$$$'); $
FIELDNAME=ACCOUNT_NUM, ALIAS=ACCOUNT_NUM, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=SUBCODE, ALIAS=SUBCODE, USAGE=A4V, ACTUAL=A4V, $
FIELDNAME=DELETE_FLAG, ALIAS=DELETE_FLAG, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=FREEZE_FLAG, ALIAS=FREEZE_FLAG, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=SUPPRESS_BDGT_MSG, ALIAS=SUPPRESS_BDGT_MSG, USAGE=A1V, ACTUAL=A1V, $
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FIELDNAME=ABR_FLAG, ALIAS=ABR_FLAG, USAGE=A1V, ACTUAL=A1V, $
FIELDNAME=GL_MAP_ACCOUNT, ALIAS=GL_MAP_ACCOUNT, USAGE=A5V, ACTUAL=A5V, $
FIELDNAME=DOLLAR_DESC, ALIAS=DOLLAR_DESC, USAGE=A20V, ACTUAL=A20V, $
FIELDNAME=ORIG_BUDGET, ALIAS=ORIG_BUDGET, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=ABR_BUDGET, ALIAS=ABR_BUDGET, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=ANNUAL_BUDGET, ALIAS=ANNUAL_BUDGET, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=PAST_BUDGET, ALIAS=PAST_BUDGET, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=FUTURE_BUDGET, ALIAS=FUTURE_BUDGET, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=CM_ACTUAL, ALIAS=CM_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=YTD_ACTUAL, ALIAS=YTD_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=PTD_ACTUAL, ALIAS=PTD_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=ENCUMBRANCES, ALIAS=ENCUMBRANCES, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=REQUISITIONS, ALIAS=REQUISITIONS, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=BUDGET_BAL_AVAIL, ALIAS=BUDGET_BAL_AVAIL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=PRIOR_CM_ACTUAL, ALIAS=PRIOR_CM_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=PRIOR_YTD_ACTUAL, ALIAS=PRIOR_YTD_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=LAST_YR_ACTUAL, ALIAS=LAST_YR_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=QTD1_ACTUAL, ALIAS=QTD1_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=QTD2_ACTUAL, ALIAS=QTD2_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=QTD4_ACTUAL, ALIAS=QTD4_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=PROJ_FYTD_ACTUAL, ALIAS=PROJ_FYTD_ACTUAL, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=TC_080_AMT, ALIAS=TC_080_AMT, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=TC_081_AMT, ALIAS=TC_081_AMT, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=TC_082_AMT, ALIAS=TC_082_AMT, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=TC_083_AMT, ALIAS=TC_083_AMT, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=CM_ORIG_BUDGET, ALIAS=CM_ORIG_BUDGET, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=CM_REVISED_BUDGET, ALIAS=CM_REVISED_BUDGET, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=YTD_REVISED_BUDGET, ALIAS=YTD_REVISED_BUDGET, USAGE=P16.2, ACTUAL=P8, $
FIELDNAME=STATE_OBJ_CODE, ALIAS=STATE_OBJ_CODE, USAGE=A6V, ACTUAL=A6V, $
FIELDNAME=DT_OF_LAST_ACTV, ALIAS=DT_OF_LAST_ACTV, USAGE=HMDYY, ACTUAL=HMDYY, $
FIELDNAME=MONTHLY_ACTV_CNTR, ALIAS=MONTHLY_ACTV_CNTR, USAGE=P10, ACTUAL=P8, $
DEFINE PYTD_ACTUAL/D14.2M=CM_ACTUAL + YTD_ACTUAL; $
DEFINE COMMIT1/D14.2M=ENCUMBRANCES + REQUISITIONS; $
DEFINE PPROJ_FYTD/D14.2M=CM_ACTUAL + PROJ_FYTD_ACTUAL; $
DEFINE PER_USED/I4=100*((ANNUAL_BUDGET - BUDGET_BAL_AVAIL)/ANNUAL_BUDGET); $