

An Introduction to MDDBs and Publishing them in webEIS Software

Prepared by



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Introduction

This presentation is designed to demonstrate the use of Multi Dimensional Databases in SAS Software and their use in a business environment. We will demonstrate their creation to enablement in a webEIS application. This presentation is designed for intermediate to advanced SAS users with some background in web decision support.

First, we need to create a libref to access our data. We'll issue code similar to the following. A SAS data set called BP1 will be located in this location.

```
Program Editor - (Untitled)
Command ==> |
00001 libname saved 'c:\sas';
00002
```

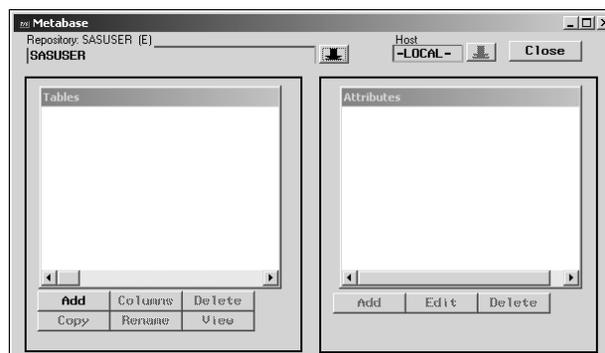
Now, we'll start EIS software.

```
Program Editor - (Untitled)
Command ==> eis
00001
00002
```

Select Metabase.



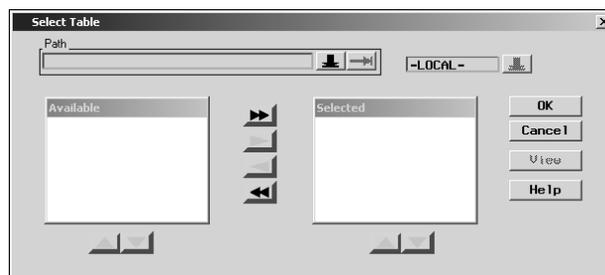
This will prompt us for a location to store our metadata. This is information about the actual data we will publish. The original data can be in detail form.



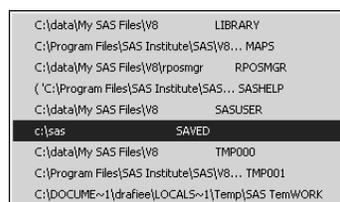
The repository will be SASUSER for this demonstration. Select



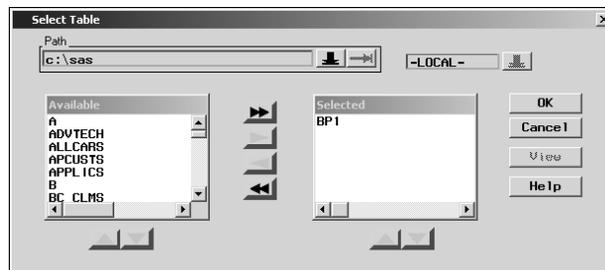
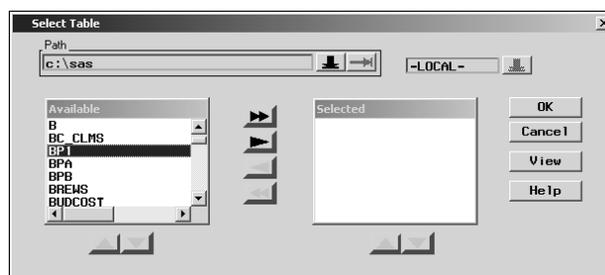
We will add the libref SAVED that we just defined to this metabase repository.



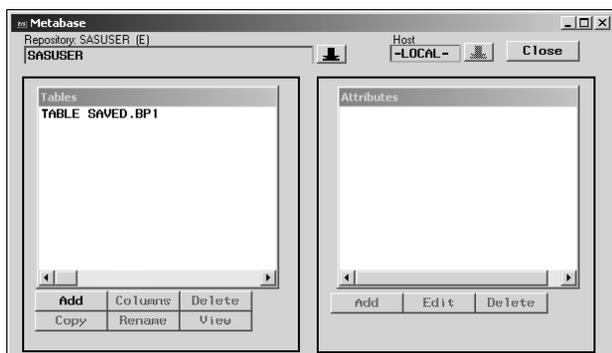
Select the  to see the following.



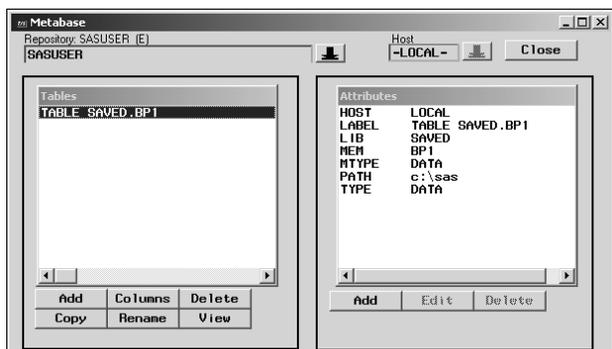
Select the BP1 data set.



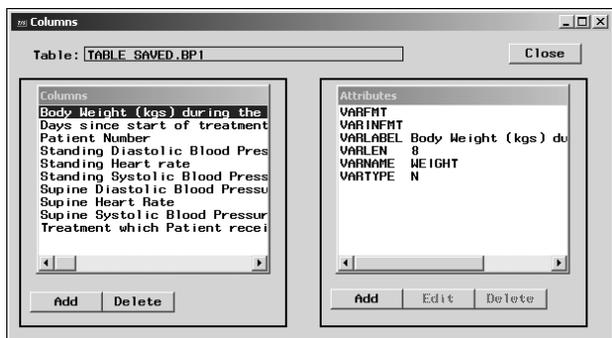
Click  when finished.



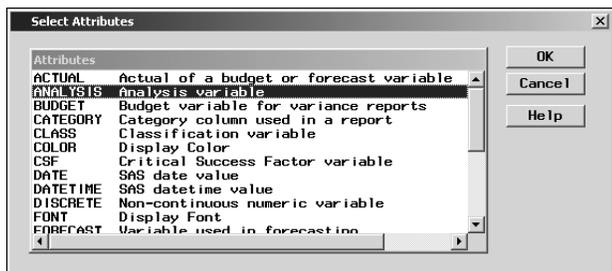
Highlight the Table listed to see the potential attributes currently assigned.



Click the **Columns** button to assign various attributes to particular columns in the data.

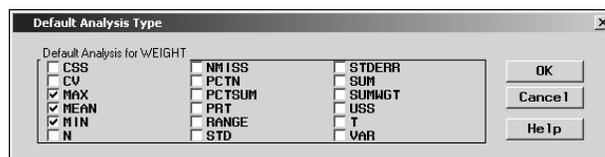


Once a column is highlighted, click **Add** to add the Analysis attribute to this variable.

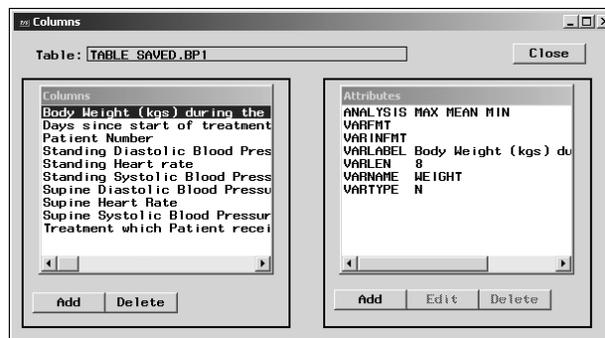


Click **OK** when finished.

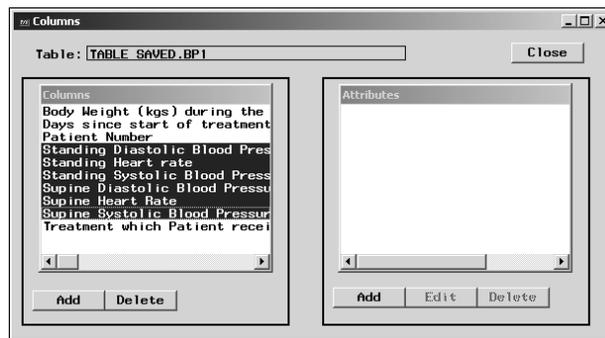
Select the type of statistics desired.



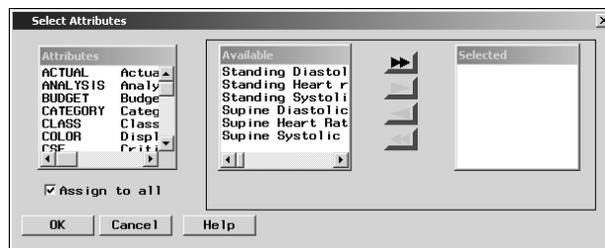
Click **OK** when finished.



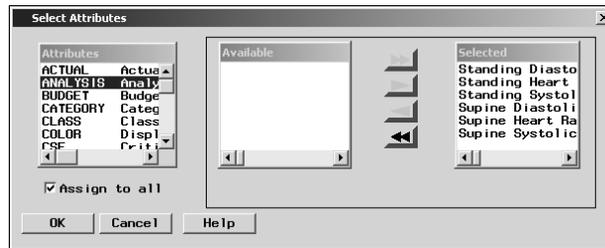
You can specify an attribute for several columns at a time by highlighting them.



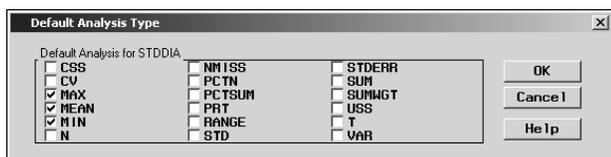
Click **Add** and the following screen will be displayed.



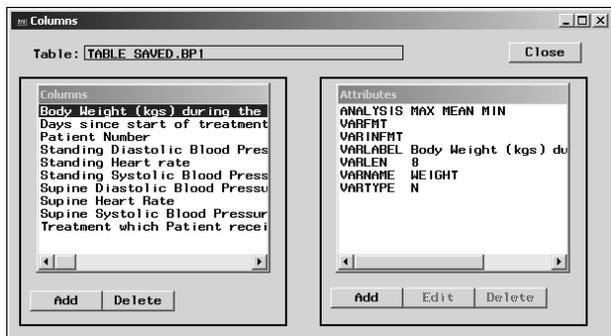
Select Analysis.



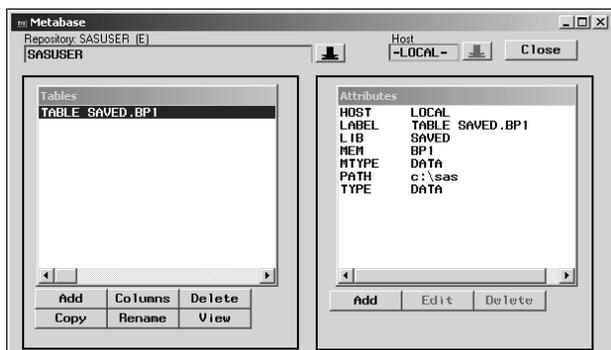
Click **OK** when finished.



Select the appropriate statistics and click **OK**

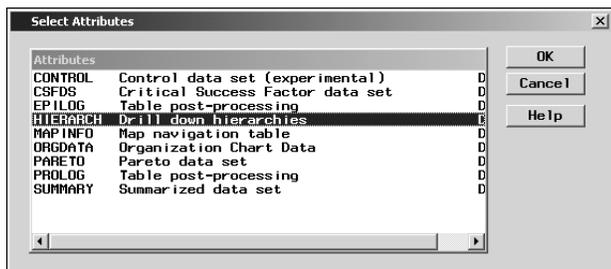


Click **Close** when you are done.



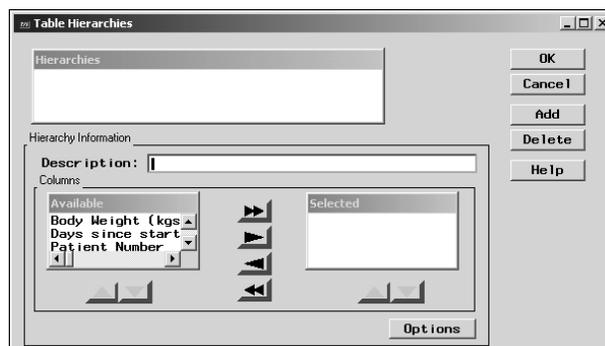
We will now add a Hierarchy to our data. This will allow some drilldown selection when the data is presented. Click the right hand **Add** button.

Select

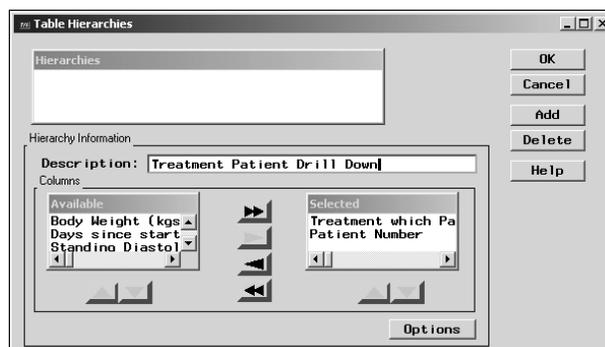


and click **OK**

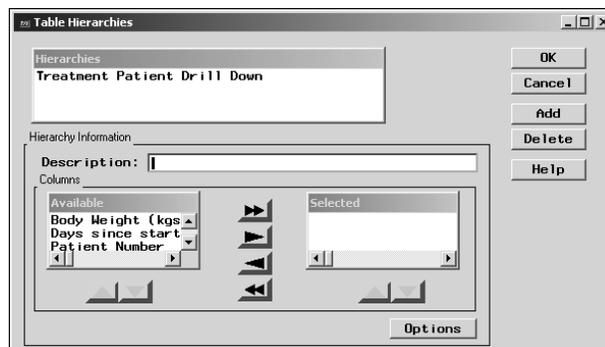
Now, we'll go through a process to define several variables to a hierarchy and then save the hierarchy with a name.



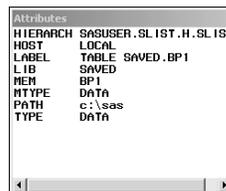
Type the name of the drilldown hierarchy and assign variables to it in the desired order.



Click **Add** when you have completed your selection for this hierarchy. You will see it appear at the top of the screen.



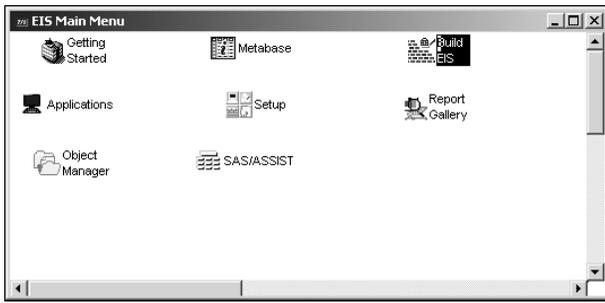
Click **OK** when finished and you'll see a hierarchy defined in the metadata.



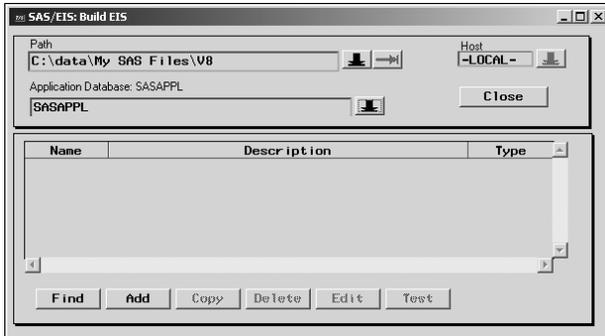
Click **Close** to close the metabase window.

Now we must build an MDDB. We'll do this through the prompting capabilities offered with SAS/EIS software. Otherwise, PROC MDDB could be used to perform similar tasks.

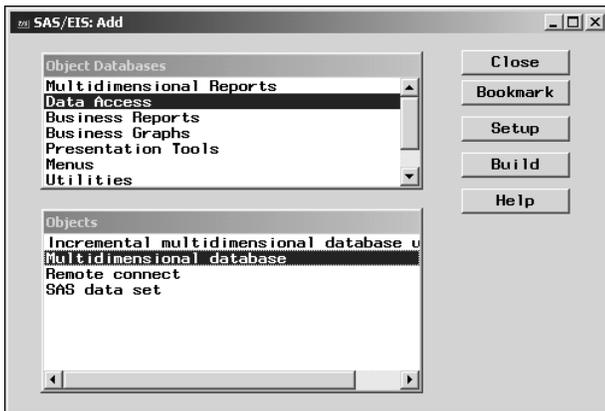
Select Build EIS.



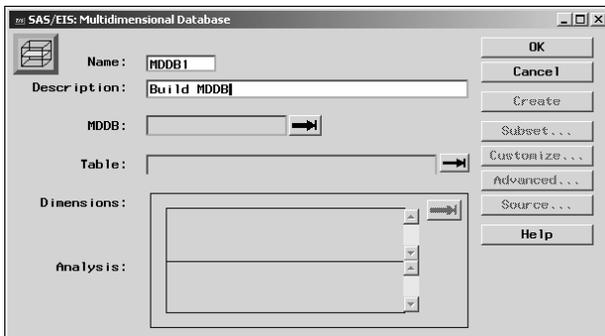
We will use the default EIS Application location. Notice it is currently empty.



Click **Add** to create an MDDB.

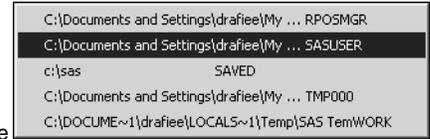
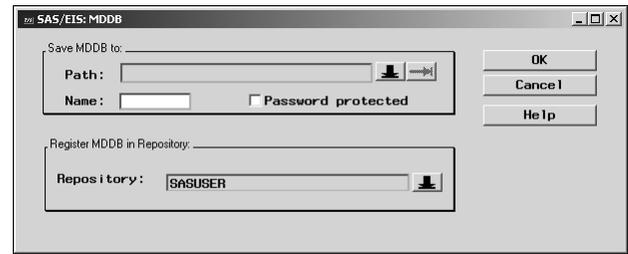


Select **Build** to take you to the following window.

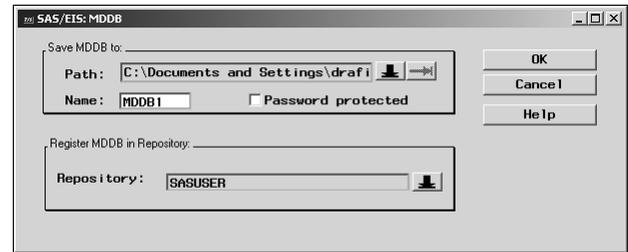


Select the first button 

Choose a location and name for the MDDB>

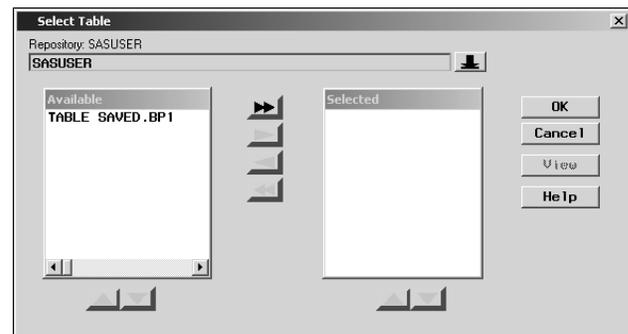


Select  to choose

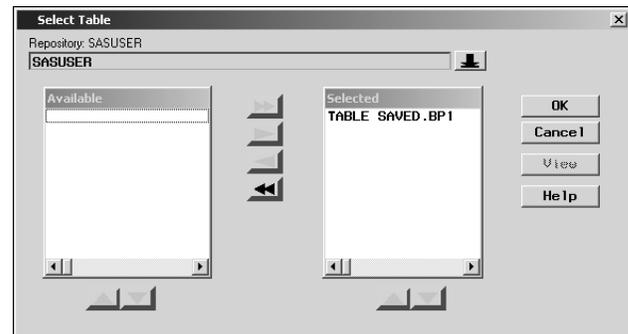


Select **OK** when finished.

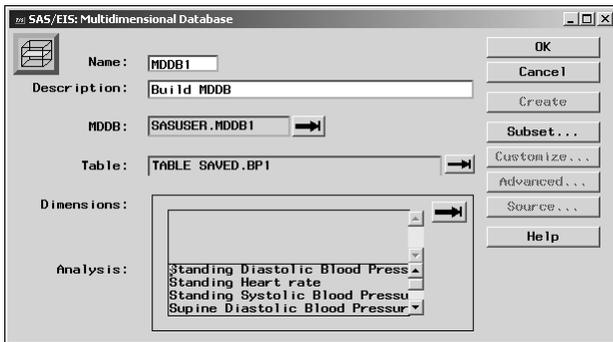
Select the second button  to see the following screen.



It is important to choose a predefined data set at this point.



Select **OK** when finished.



For the Dimension, select the button 



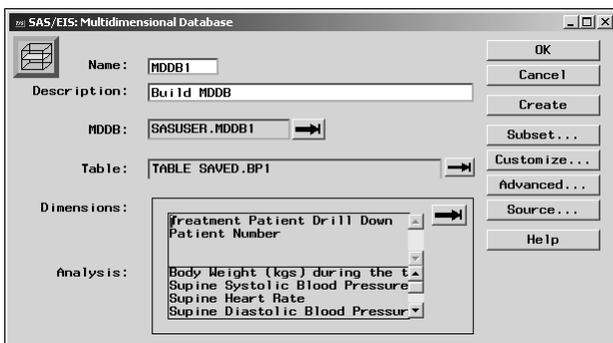
Choose the appropriate dimensions desired.



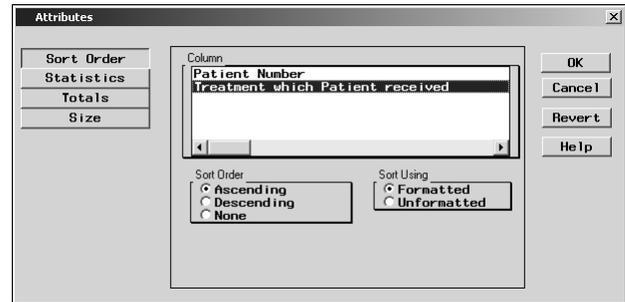
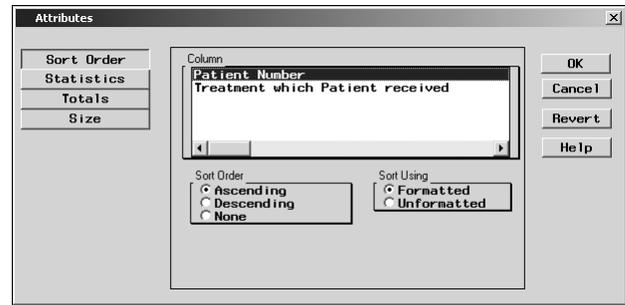
Choose the appropriate analysis desired.



Select  when finished.



Choose  to select the order of column data. Here, we will select everything in ascending order.

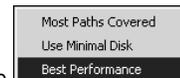
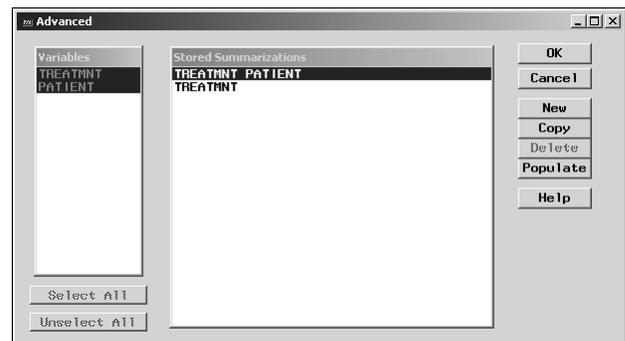


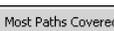
We will choose desired statistics.

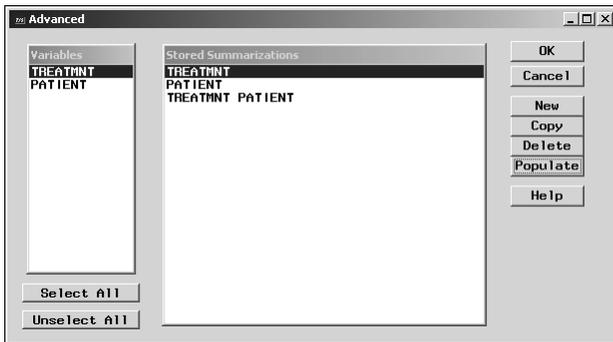


Click  when finished.

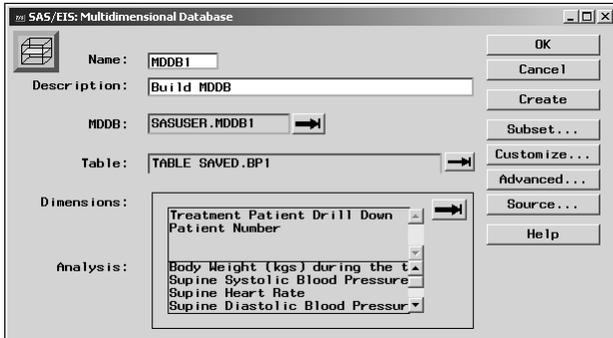
The prestored hierarchy of the MDDB can be selected with the  button.



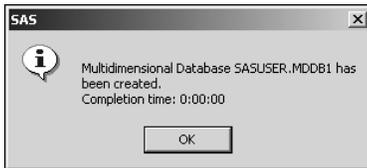
We will select  to choose . This stores all possible hierarchies available. This works well for the fastest access speed during use. This also works well because the data we are using is very small. Results of MDDB size will vary with more hierarchies. It is a good idea to keep the MDDB structure to a minimal number of hierarchies.



Click **OK** when finished.

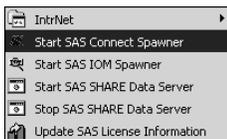


Click **Create** to actually create the Mddb. The following message will be displayed when processing is finished.

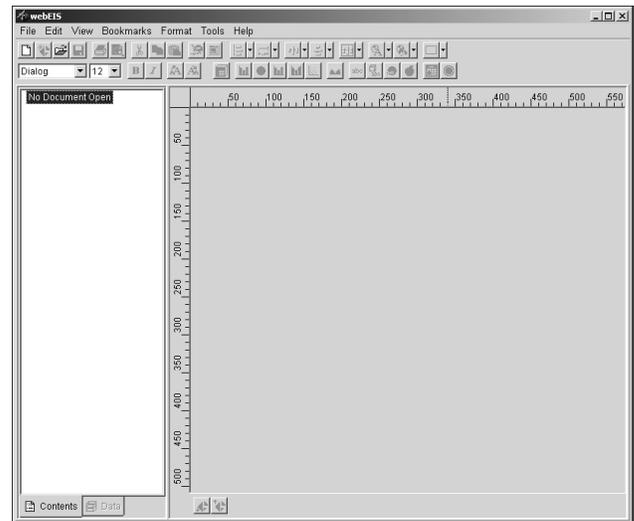
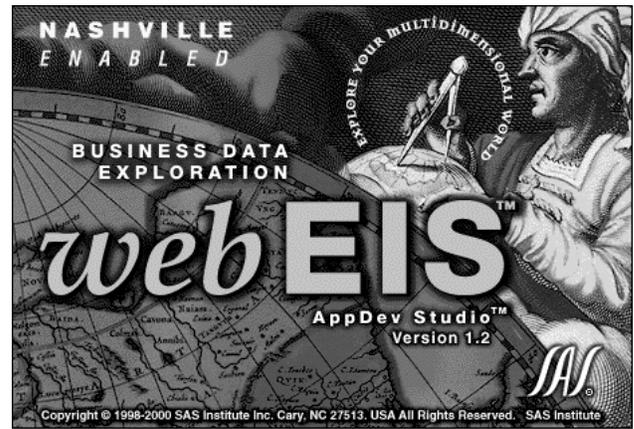


Click **OK**, **OK** and **Close** to end out of this.

Under the Appdev Studio menuing selection, load the Spawner. This is used for development purposes.



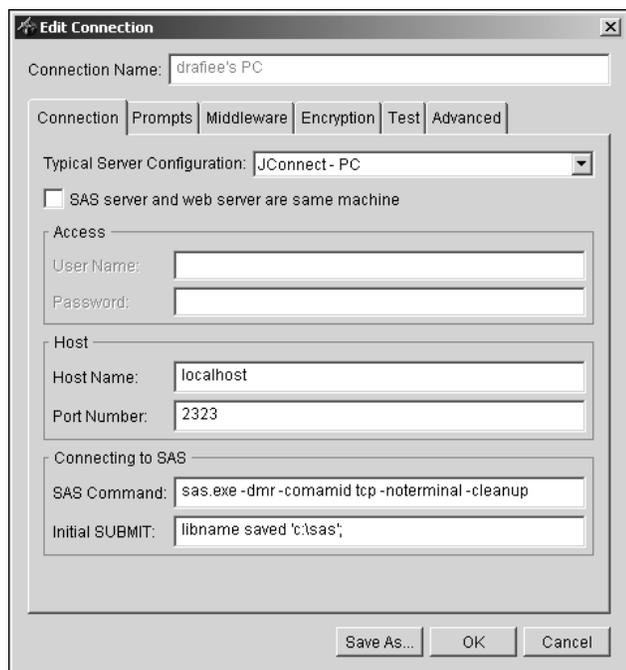
Now load webEIS from the Appdev Studio menu to see the following screen.



First, we need to check our connections to make sure we have access to all of the data needed. Select Tools, Appdev Studio Connections

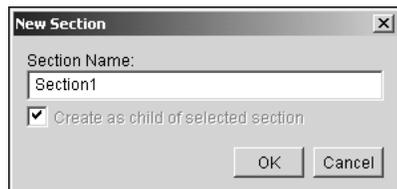
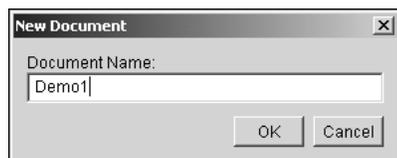


Select **Edit...** to see your connections.

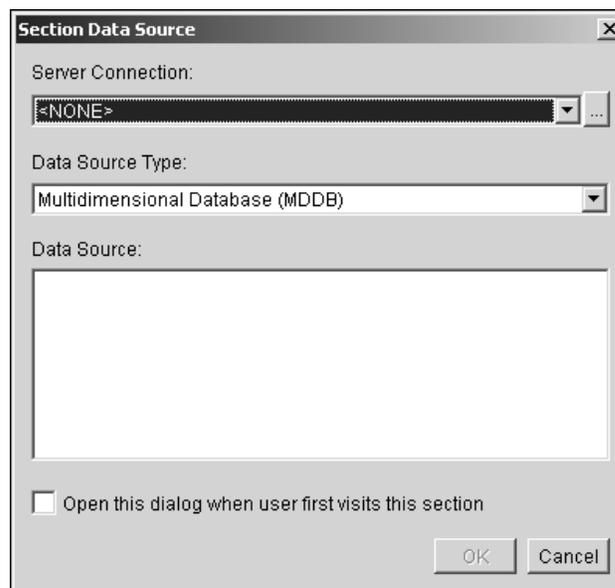


Modify it to add the appropriate libname statement in the Initial Submit section and then click when done.

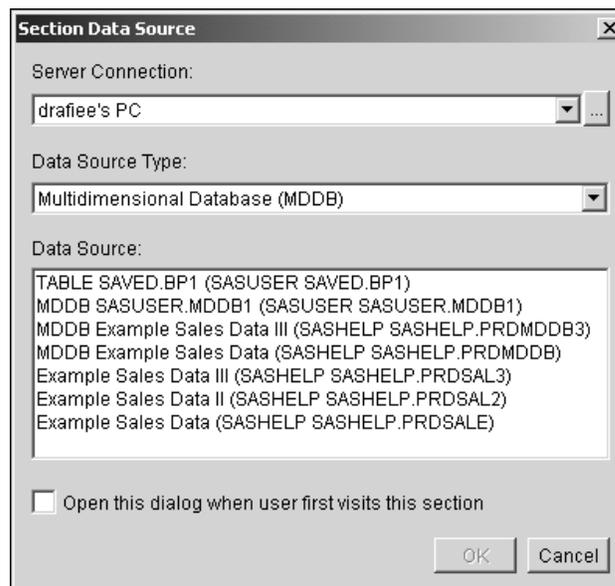
Now, create a new document and section. Select File, New



and click

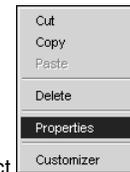
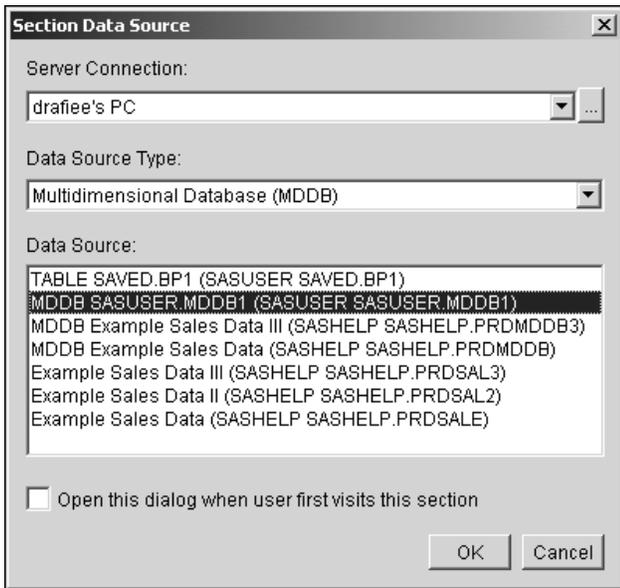


Select your PC

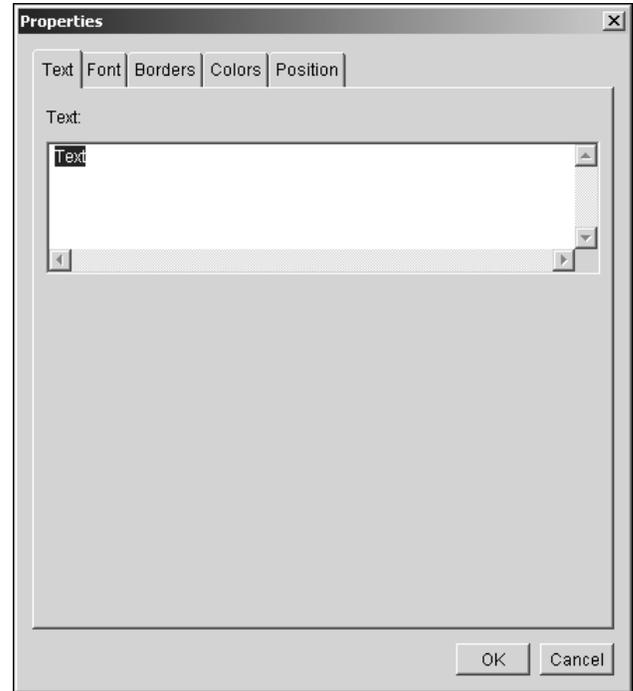


All of the tables available will be listed.

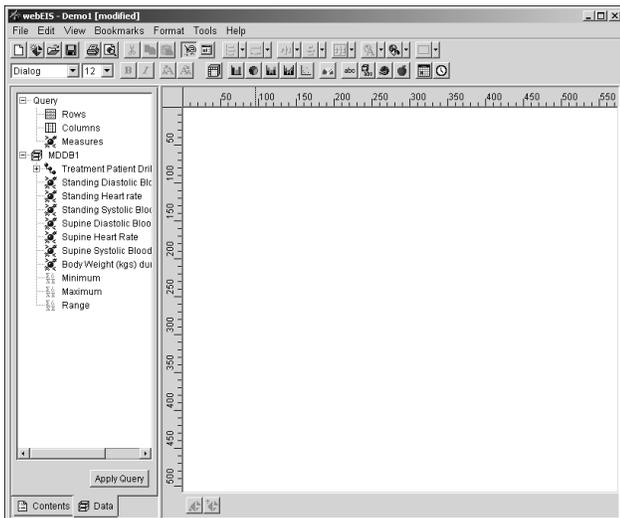
Select the MDDB file created earlier.



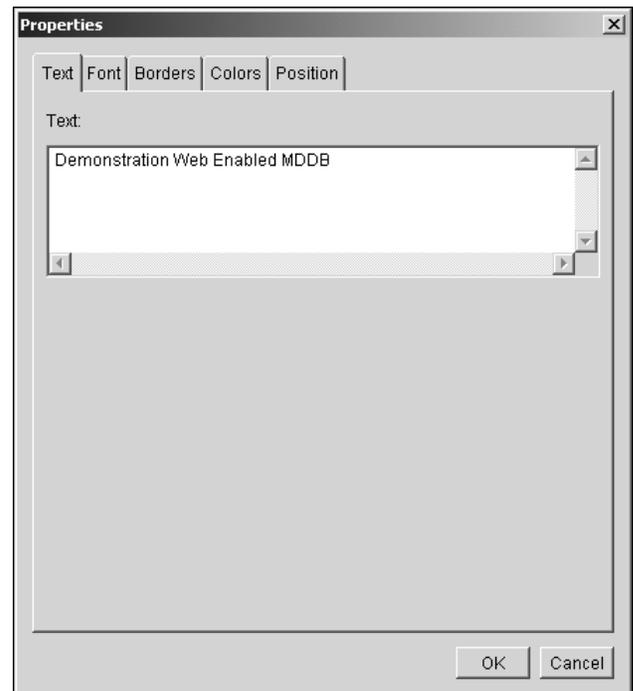
Right click on the Text box and select



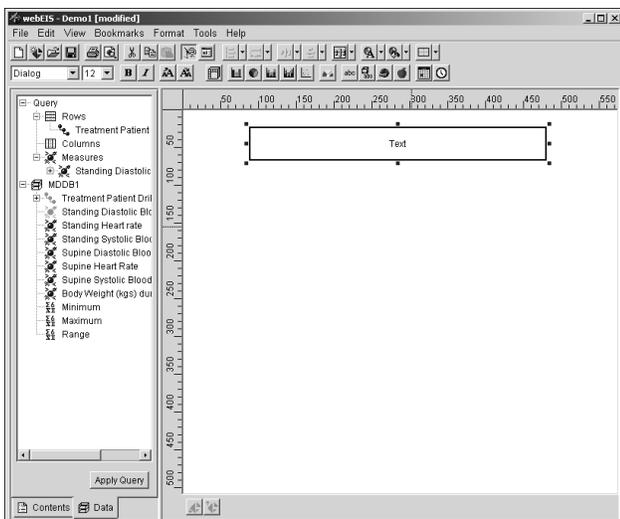
Click **OK** and the following screen is displayed.



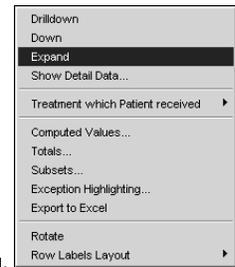
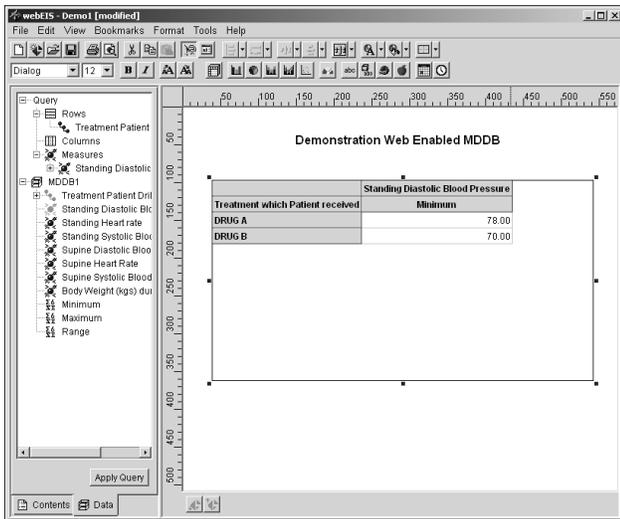
Change the title to what is appropriate and click **OK**



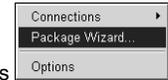
Place a title on the webEIS document by clicking on the abc button. Draw out the area for the title.



Select the MDDB button and draw out the location for the MDDB to be displayed.



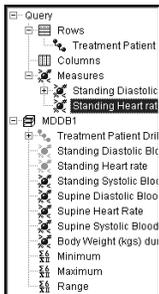
A right click displays the following menu.



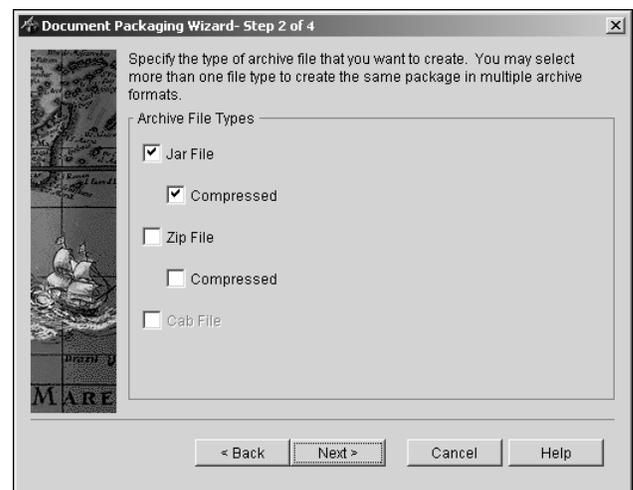
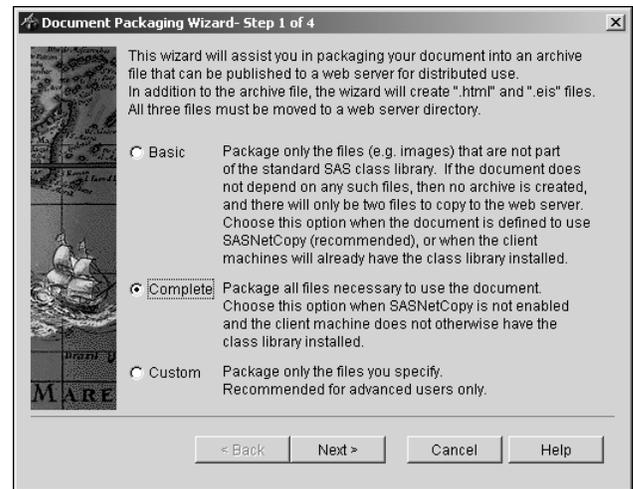
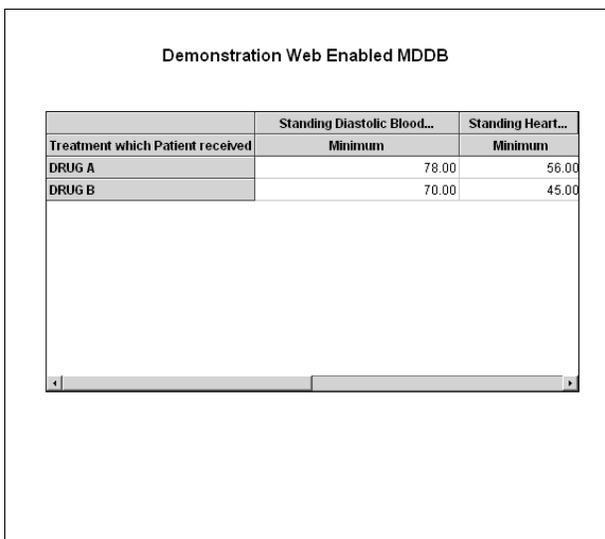
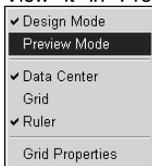
When you are ready to package it, select Tools

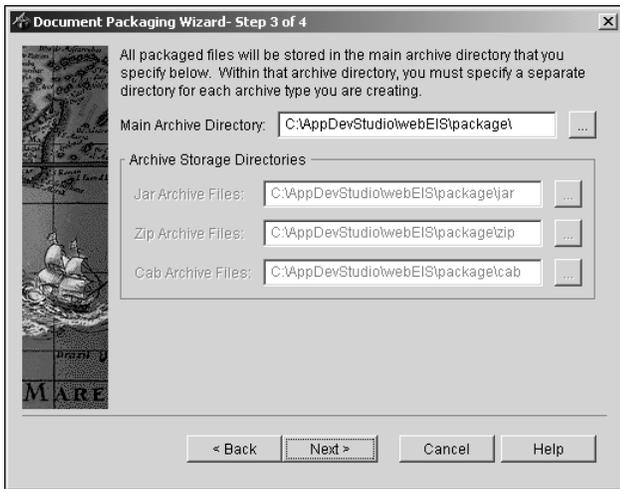
The following menu will appear. We strongly suggest you select Complete to use SASNetCopy. This bundles everything needed for long term use and speed of web based MDDB access. Click Next and following the menus, making sure the items are selected as we have them here.

Drag and drop the desired statistics in the left hand display onto the word Measures.

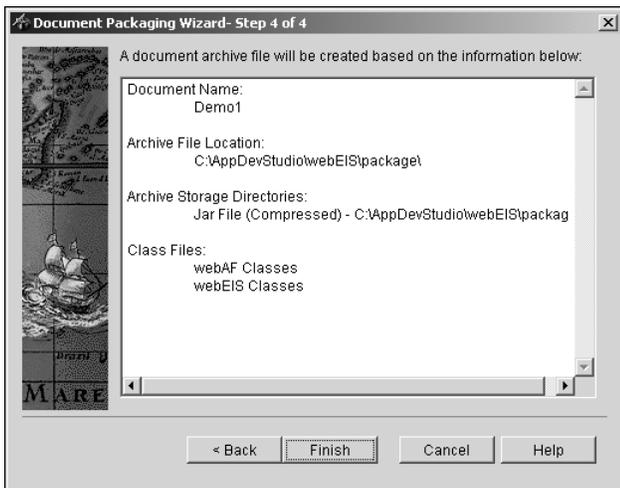


View it in Preview Mode by Selecting the View pulldown and

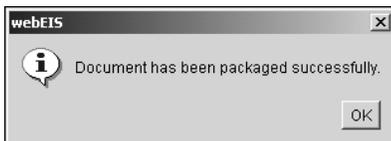
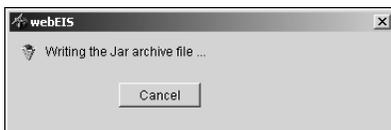




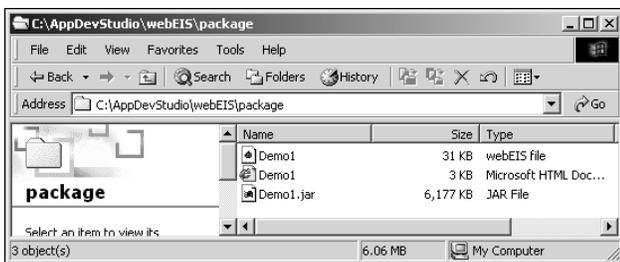
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When you click Finish, prompts similar to the following will appear.



You will find all of the documents needed in the following location.



They must all be moved to the web server. Load the HTML file and the MDDB will appear.