Dream Report

OCEAN DATA SYSTEMS
The Art of Industrial Intelligence

Dream Report Tech Note – November 10, 2014

Using a Multi-Select Combo Box with a SQL Query - Dream Report 4.6 R3

In this example, we will use a Multi-Selection Combo Box to enable a dynamic set of fields to use in a SQL query, and to pass a list of possible values to use in a SQL "Where…" expression. This example uses the sample "Process" database (process.mdb) installed with Dream Report
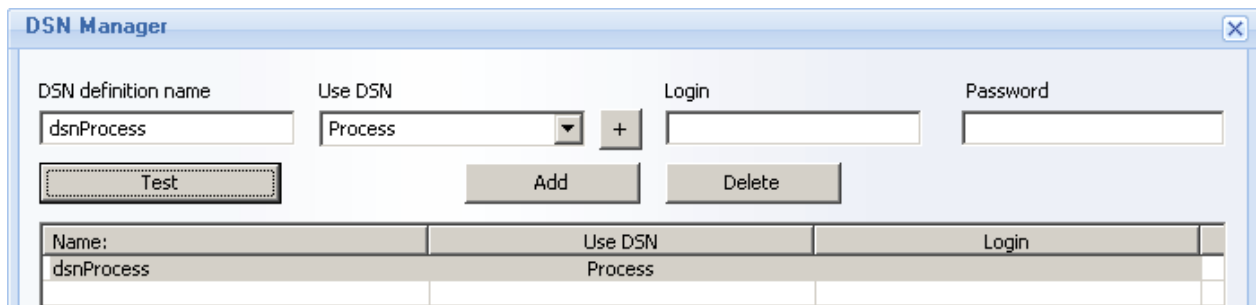
> **Note**:
> The following two lines must be added to the *DreamReport.ini* file,
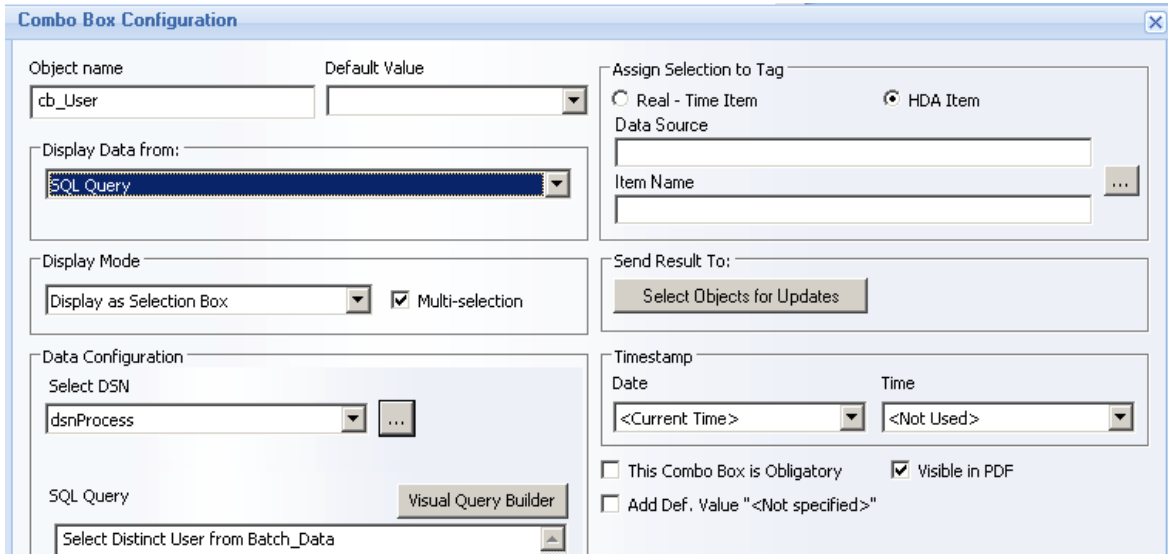> located in \ODS\Dream Report\System
>
> **[AutoAddQuotes]**
> **Use=no**

1. In Dream Report Studio, select the **DSN Manager** from the "Tools" toolbar, and create an ODBC DSN (Data Source Name) named "dsnProcess", which references the "Process" DSN:
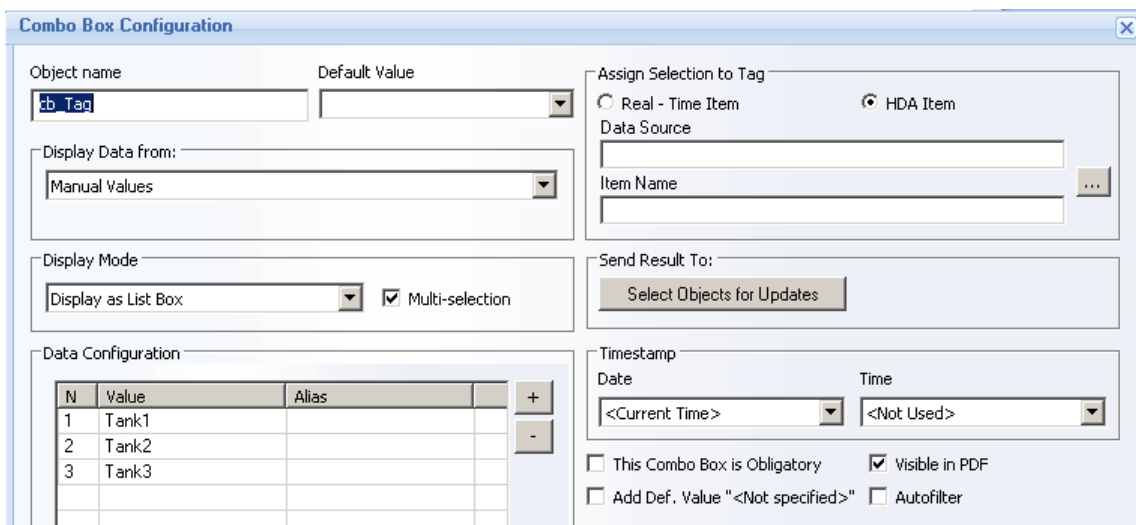

2. Add a **Combo Box** (from the Web Elements tab) to a new Web report, and name the Combo Box "*cb_User*"

3. Set the "Display Mode" to "*Display as Selection Box*", and ensure that the "Multi-Selection" option is checked

4. Configure the "Display Data from:" option. In this example, we will execute a SQL Query to get a list of users from the *Batch_Data* table in the Process database. This list could also be populated with a manually-entered list of items, Batch ID's, etc.

5. In this example, we will execute a SQL Query to get a list of users from the *Batch_Data* table in the Process database:

6. Add a second Combo Box to the report, named "*cb_Tag*"

7. Set the "Display Mode" to "*Display as List Box*", and ensure that the "Multi-Selection" option is checked

8. Configure the "Display Data from:" option to be "Manual Values", and enter *Tank1*, *Tank2* and *Tank3* as available options:
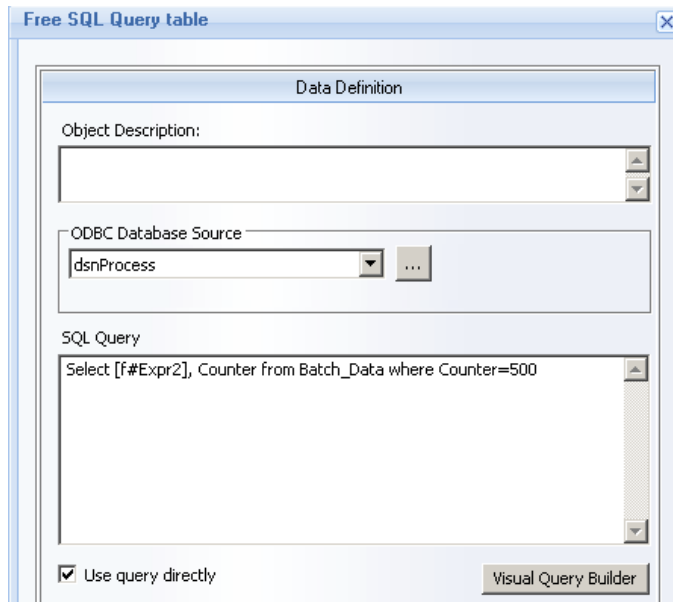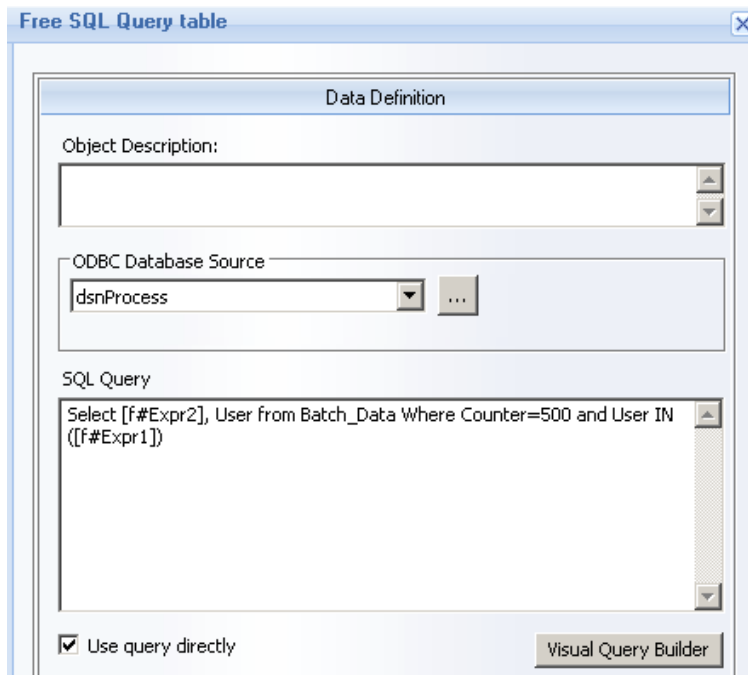
9. From the right-side toolbar, select and add an **Expression Data** object to the report, and name the object "*Expr1*"

10. In the expression area, type in the following function, which references the first Combo Box ("cb_User"):   `OdsObjComboGetSelectedListQuoted('[on#cb_User]')`

11. Under the "Result Representation" tab, you may choose to <u>un-check</u> the "Visible" option, but during development, it is a good idea to keep this visible, to verify what is being passed into the subsequent SQL query

12. From the right-side toolbar, select and add another **Expression Data** object to the report, and name the object "*Expr2*"

13. In the expression area, type in the following function, which references the second Combo Box ("cb_Tag"):   `OdsObjComboGetSelectedList('[on#cb_Tag]')`

14. From the right-side toolbar, select and add a **SQL Query Table** object to the report

15. Select "*dsnProcess*" from the "ODBC Database Source"

16. For this query, we will query a list of tank level tags (which will be passed in from the "cb_Tag" combo box) and a counter value from the *Batch_Data* table, where the Counter=500 – i.e., this query has a dynamic "*Select…*" statement, and a fixed "*Where…*" expression. Enter the following SQL Query:

```
Select [f#Expr2], Counter from Batch_Data where Counter=500
```


17. From the right-side toolbar, select and add another **SQL Query Table** object to the report

18. Select "*dsnProcess*" from the "ODBC Database Source"

19. For this query, we will query a list of Motor tag fields (which will be passed in from the "cb_Tag" combo box) from the *Batch_Data* table, where the Counter=500 AND the User is one of the Users selected in the "cb_Users" combo box – i.e., this query has a dynamic "*Select…*" statement, and a dynamic "*Where…*" expression. Enter the following SQL Query:
    ```
    Select [f#Expr1], User from Batch_Data Where Counter=500
    And User IN ([f#Expr2])
    ```
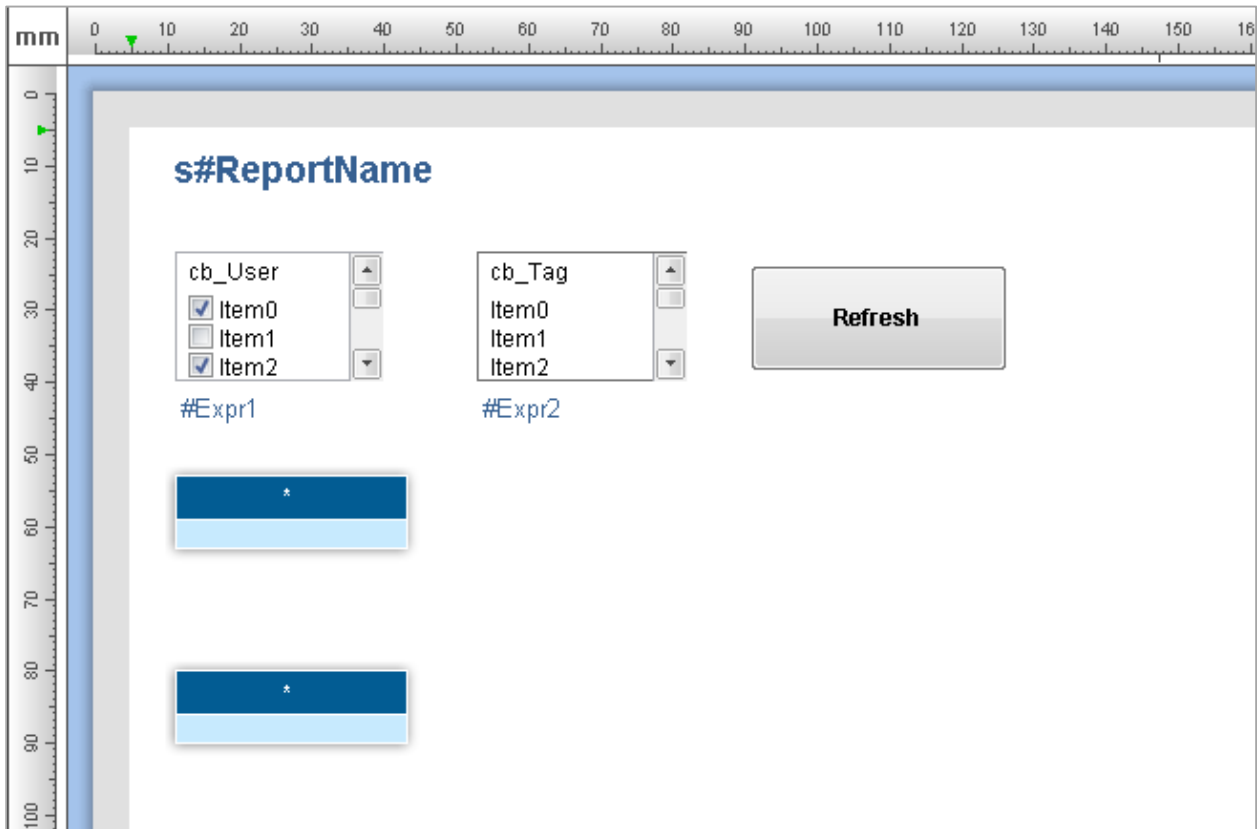
20. Add an **Action Button** (from the Web Elements tab) to the report, with the Button Caption "Refresh", and the action being "Refresh Report"

21. The resulting report should look similar to this in Studio:

s#ReportName

cb_User	cb_Tag	
☑ Item0	Item0	Refresh
☐ Item1	Item1	
☑ Item2	Item2	

#Expr1   #Expr2

22. Running the report in a web browser, with user-selections in the Combo boxes, results in the following:

SQL Test Report

☑ Fred
☐ Jim
☑ Paul

'Fred','Paul'

Tank1 ▲
Tank2
Tank3
▼

Tank1,Tank2,Tank3

Refresh

[-]

Tank1	Tank2	Tank3	Counter
300.00	75.00	750.00	500.00
450.00	150.00	375.00	500.00
450.00	150.00	375.00	500.00
450.00	150.00	375.00	500.00
600.00	225.00	225.00	500.00
600.00	225.00	225.00	500.00
600.00	225.00	225.00	500.00
600.00	225.00	225.00	500.00
900.00	450.00	225.00	500.00
1,050.00	600.00	750.00	500.00
1,125.00	675.00	1,500.00	500.00
1,125.00	675.00	1,500.00	500.00

[-]

Tank1	Tank2	Tank3	User
300.00	75.00	750.00	Fred
600.00	225.00	225.00	Paul
900.00	450.00	225.00	Fred
1,050.00	600.00	750.00	Paul
1,125.00	675.00	1,500.00	Fred
1,185.00	1,470.00	750.00	Fred
1,260.00	375.00	750.00	Paul
1,260.00	375.00	750.00	Paul
1,260.00	375.00	750.00	Paul
1,320.00	975.00	225.00	Paul
1,320.00	975.00	225.00	Fred