BIRT Dynamic Parameter List Functional Specification

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Document Revisions

Version	Date	Description of Changes
Draft 1	8/04//2005	Initial draft.
Draft 2	8/30/2005	Updates based on review comments
Draft3	9/15/2005	Updates based on UI mockups

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1. Introduction

Report parameters allow user to create a report design that generates specialized reports based on user inputs. Parameters also provide a filtering mechanism, where the report can be run for a particular set of data. The current version of BIRT allows user to create parameter of different data types. It also allows user to specify a list of static parameter values for a parameter. In Birt 2.0 release we plan to support dynamic parameters.

Dynamic parameters allow values to be retrieved dynamically at run time, from any external source such as a Database, file or script. This document describes the support for dynamic parameters

2. Use cases

Following are some of the use cases supported by this feature.

2.1 Dynamic Pick Lists

A report designer wants to create a report, which displays the sales of items in stores for the specified city; the report has ‘city’ as one the parameter. Every time a store in opened in a new city, the parameter value list is dynamically populated with the new city names.

- A report designer defines a parameter “city”. Sets the parameter value list type to dynamic and provides the dataset information
- When a report user run the report the parameter city is prompted. The user picks the city from the parameter value list; the report is generated for that city. Next time the report user runs the report; the parameter value list for the parameter city contains all the news added city names too.

2.2 Cascading Parameters

A report designer wants to create a report with cascading parameters. Cascading parameters gives the user the ability to relate parameters. Depending on the value selected for a parameter, the parameters cascading under the selected parameter should be affected. For e.g. a report has the following cascading parameter

Country

State

City

When a user selects a particular country from the list, second list is updated to show all the states in that region. When the user selects a state, the third list is updated to show all the cities for the selected state.

- A report designer defines cascading parameters “country, “state” and “city”. Provides the dataset information. Note the order of the parameters defines the cascading rule.
- When a report user runs the report the parameter ‘country’, ‘state’, ‘city’ are prompted. Depending of the value selected for a parameter, the parameters cascading under the selected parameter are affected.

3. Dynamic Pick list

For dynamic pick list the report parameter value list are automatically and dynamically generated from a query at the time the report parameter page is displayed to an end-user. The parameter values are not stored in the report design. This is achieved by allowing report designer to associate a dataset column with the report parameter in the parameter definition.

3.1 BIRT Designer changes

Create a parameter with dynamic pick list

The parameter dialog will be enhanced to allow user to create parameter with dynamic pick list. When the user creates a parameter, he will be given an option to specify if the parameter value list is static (default) or dynamic. The Dynamic option is enabled only if dataType equal to list or combo. The report parameter dialog will be enhanced to support dynamic pick list. The report designer provides the following data:

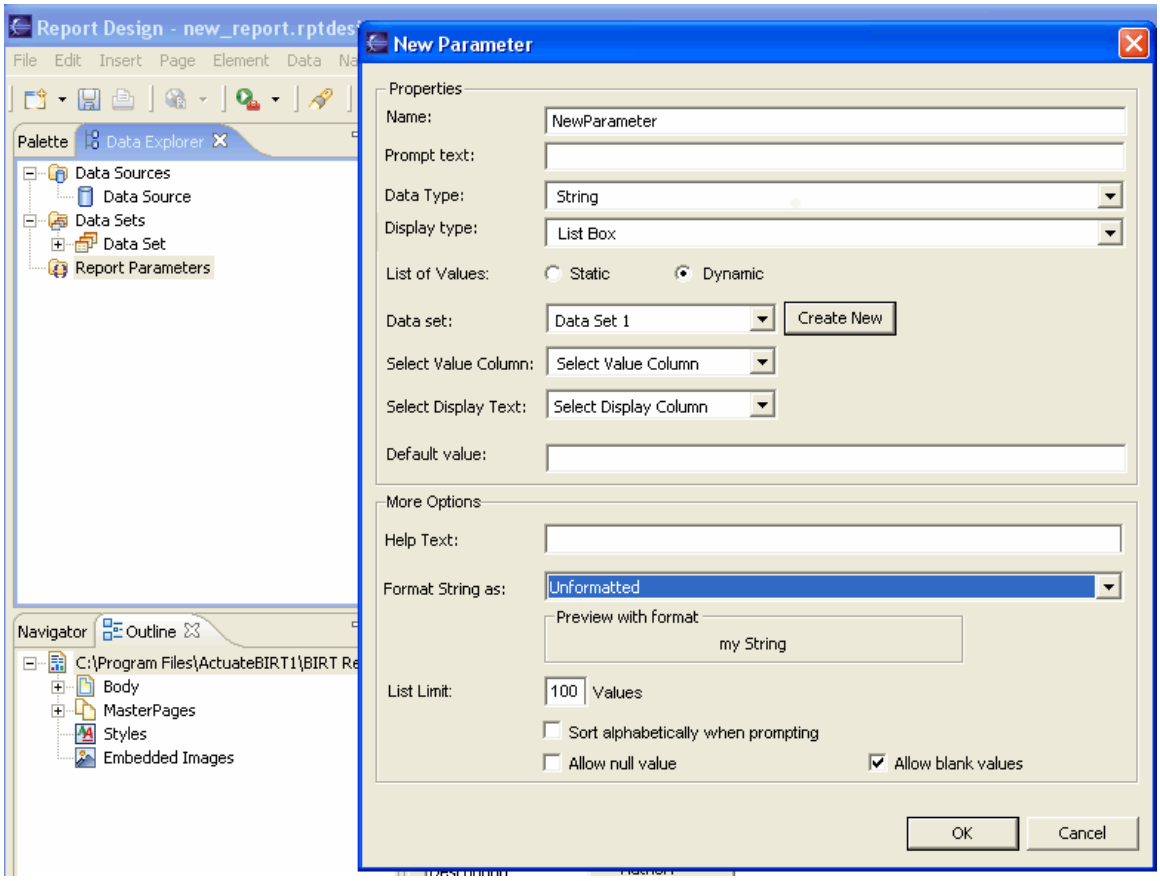
- Dataset - The dataset to be executed to get the dynamic parameter value list.
- Select Value Column: Name of the dataset column to be used as the Value column in the report parameter page. When a user selects an item in the parameter value list, the Value Column value is used as the report parameter value.
- Select Display Column (optional) - Name of the dataSet column to be used as the display value; in the report parameter page the parameter value list is populated with the items in this column.

- The limit on the number of items returned in the parameter value list is configurable using the Limit property. The default value is set to 100
- Default Value to be shown for the parameter value list.

☞ *The CreateNew button allows user to create a new dataset.*

☞ *It is recommend to use a dataset that is designed to return a relatively small result set*

Dialog to input the parameter definition for dynamic values.



3.2 BIRT Viewer Changes - Report Parameter page:

The report parameter page will be enhanced to dynamically generate the parameter value list.

4. Cascading parameters

In cascading parameters user can define a set of parameters where the list of values for one parameter depends on the value chosen in another parameter. The values of the parameters lower in the cascade depend on the value selected above them. This process of filtering a list of parameters values based on a value from another parameter is known as cascading.

- The order of the parameters defines the hierarchy. It is the responsibility of the report designer to make sure that the order in which the parameters are cascaded is meaningful. For e.g. in the example above where we have three cascaded parameters “Country”, “State”, and “City”, a logical order would be Country, State and City. If the order is chosen as Country, City, and State then this is an incorrect hierarchy.
- The cascading parameters are associated to a single dataset. As a result the cascading parameters bind to different columns of the same dataset.
- Each parameter in the in the cascading parameters can be individually used on the report design layout.

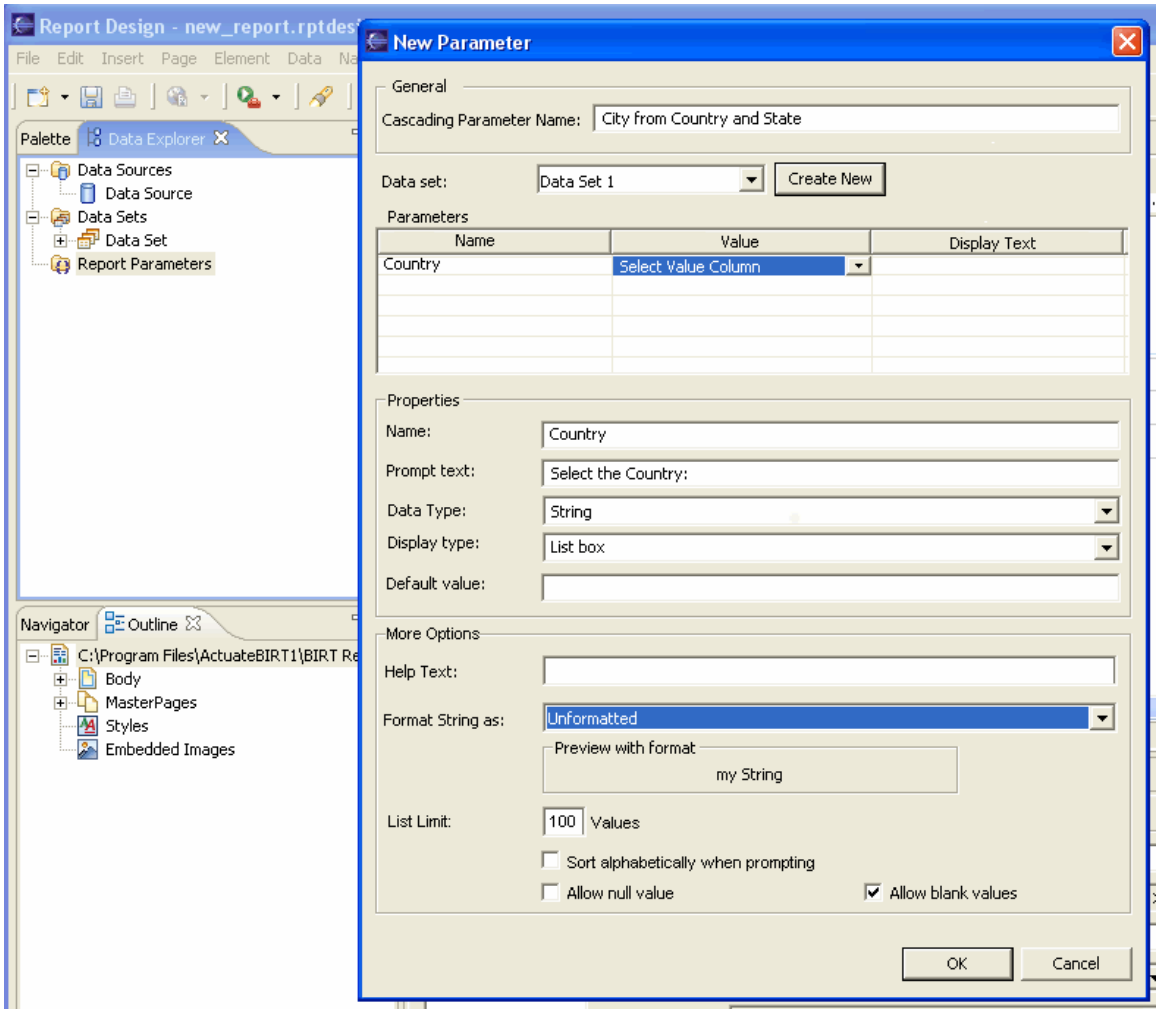
4.1 BIRT Designer Change

Create Cascading Parameters

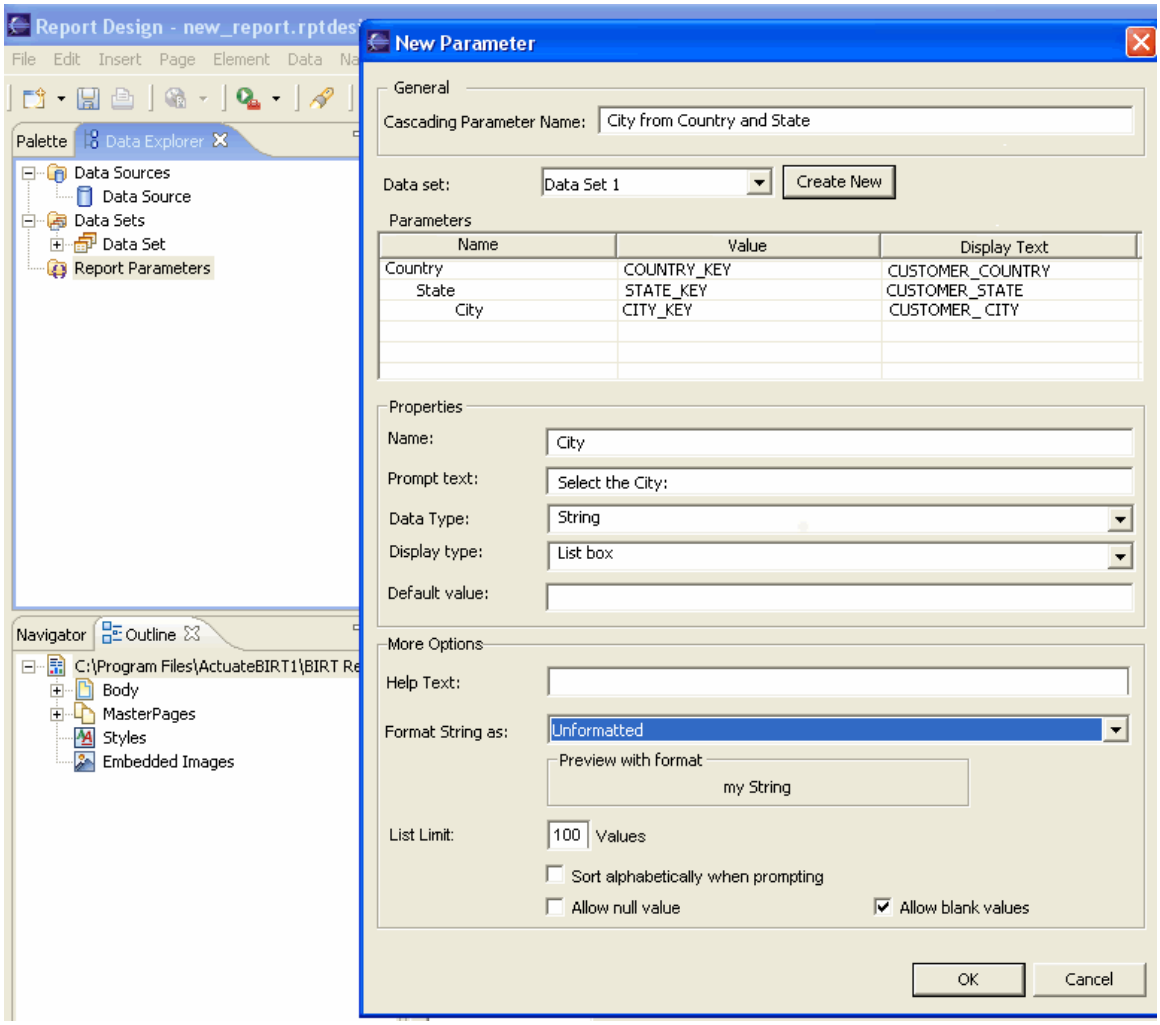
A new parameter dialog will be used to allow user to specify the cascading parameters; the dialog will input the following:

- Cascading parameter name – Name of the cascading parameter group.
- DataSet name – Name of the dataset to which this parameter is bound. Note the same dataset is shared for all the cascading parameters.
- List of cascading parameters - Each item contains the displayColumnName, ValueColumnName and other parameter properties.

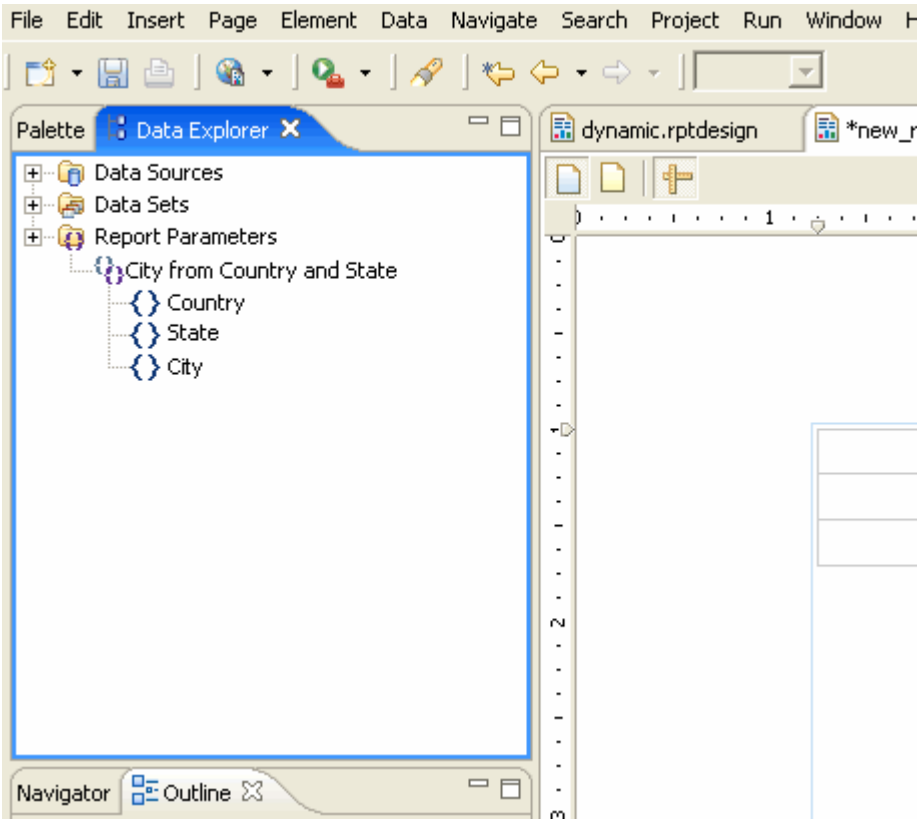
Dialog to create cascading parameters



Cascading parameter with three parameters defined -



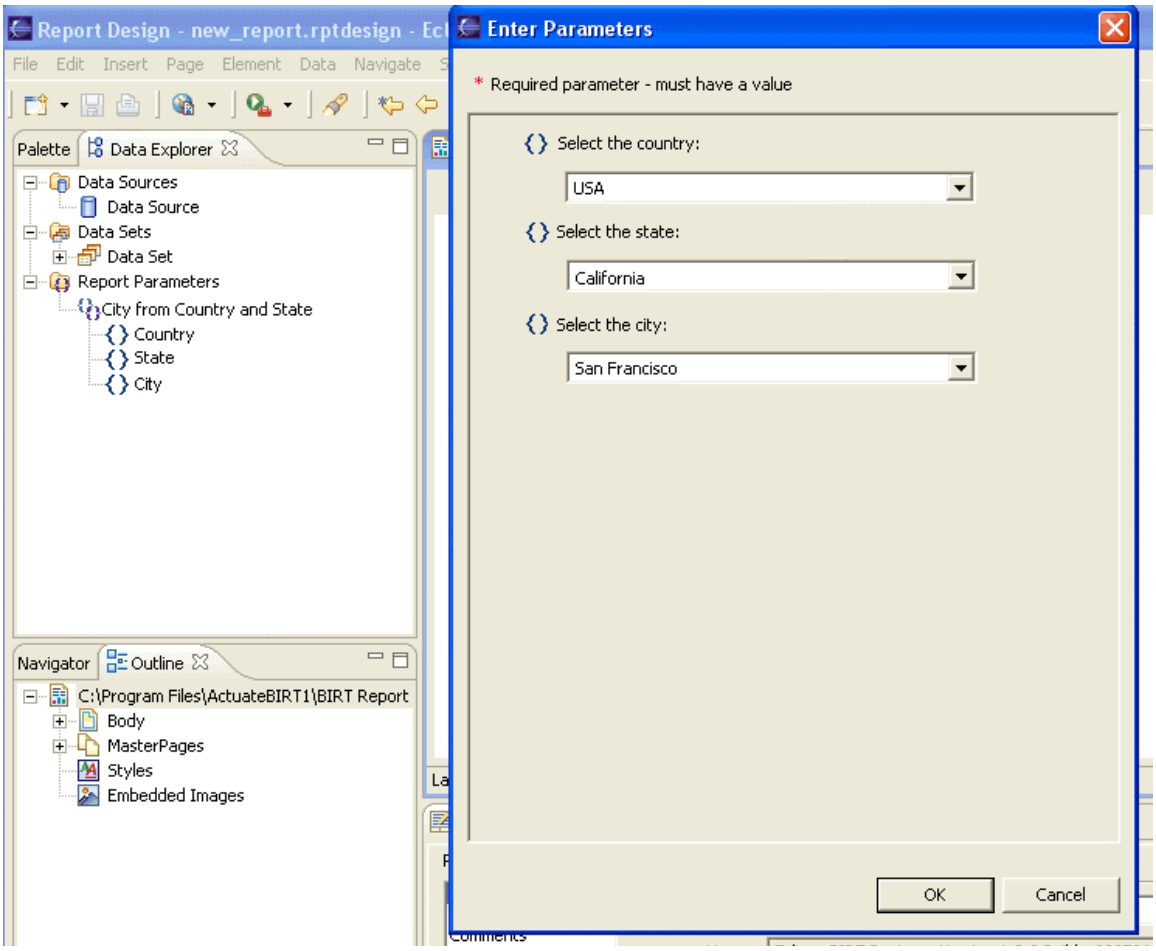
Data Explorer View showing the cascading parameters



4.2 BIRT Viewer - Report Parameter Page

The report parameter page will be enhanced to show the cascading parameters.

- The values of the cascading parameters are dynamically populated, and they will be displayed in the same order in which they are defined.
- The value selected in the list will affect the next parameter value list in the parameter hierarchy. Example if there are 3 cascading parameters, the first parameter is enabled and the other two parameters are disabled based on the value selected in the first parameter the second list is updated and enabled.


Report Design - new_report.rptdesign - Ecl
File Edit Insert Page Element Data Navigate
Palette
Data Explorer
Data Sources
Data Source
Data Sets
Data Set
Report Parameters
City from Country and State
Country
State
City
Navigator
Outline
C:\Program Files\ActuateBIRT1\BIRT Report
Body
MasterPages
Styles
Embedded Images
Enter Parameters
* Required parameter - must have a value
Select the country:
USA
Select the state:
California
Select the city:
San Francisco
OK
Cancel