BIRT Dynamic Parameter List Feature Specification

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Document Revisions

Version	Date	Description of Changes
Draft 1	8/04//2004	Initial draft.

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. These values are displayed in the form of pick Lists (referred to as Dynamic Pick lists in this document)

This document describes the support for dynamic parameters, and the related use cases from the point of view of a report developer. It is then followed by a detailed description of the types of dynamic parameters.

2. Use cases

2.1 Dynamic Pick Lists

A report developer has to create a report, which displays the sales of items in stores in each city. He creates a report and defines a parameter called “city”. When he tries to preview the report, he is prompted for the value of the city. When the city is selected from the parameter list, the report displays the required data for that city. Now every time a store in opened in a new city, the parameter value list is dynamically populated with the new city names, the report developer does not have to modify the report designs.

- The Report design calls a script, which returns a list of available cities, which are displayed in the Dynamic pick list

2.2 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 are affected. For e.g. a report has three parameter lists

Region

State

City

When a user selects a particular region 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.

3. Dynamic Parameters

3.1 Creating a Dynamic Parameter

The existing parameter dialog will be enhanced to support dynamic parameters. When the user creates a parameter, he will be given an option of specify if the parameter type is static (default) or dynamic. If the "Dynamic" parameter type is selected, the user has to specify the following

- DataSet name.
- Display Column - Name of the dataSet column; the parameter value list is populated with the items in this column.
- Id Column (optional) - Name of the dateSet column; when a user selects an item in the parameter value list, the corresponding Id Column value is used as the report parameter value.

☞ *Note: The Id column is optional, if the Id column is not specified, the Display Column is used as the Id column.*

☞ *Note: The limit on the number of items returned in the parameter value list is configurable.*

3.2 Report Parameter page:

The report parameter page will be enhanced to display the parameter value list dynamically in a List Box. The user can choose the parameter value from this List.

4. Cascading parameters

In cascading parameters you 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.

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 “Region”, “State”, and “City”, a logical order would be Region, State and City. If the order is chosen as Region, City, and State then this is an incorrect hierarchy.

4.1 Creating a Cascading parameter

Creation of a cascading parameter is similar to the creation of a dynamic parameter. In addition the user has to specify the list of cascaded parameters.

The existing parameter dialog will be enhanced to specify the following:

- DataSet name – Name of the dataset to which this parameter is bound
- List of cascaded parameters - Each item contains the displayColumnName, IdColumnName. The order of the list defines the hierarchy.
- Group description – Text that appears at the beginning of the cascading parameters.

4.2 Report Parameter page

The report parameter page will be enhanced to show the cascaded parameters. The values of the cascading parameters are dynamically populated, and they will be displayed in the same order in which they are defined.