BIRT EXPRESSION BUILDER SPECIFICATION

Author: Qiangsheng Wang

1. Introduction

The expression builder provides the GUI to build expression based on JavaScript syntax. With the expression builder in BIRT 1.0, it is awkward to build the expression using the user interface.

This spec defines the features and GUI behavior the expression builder will provide.
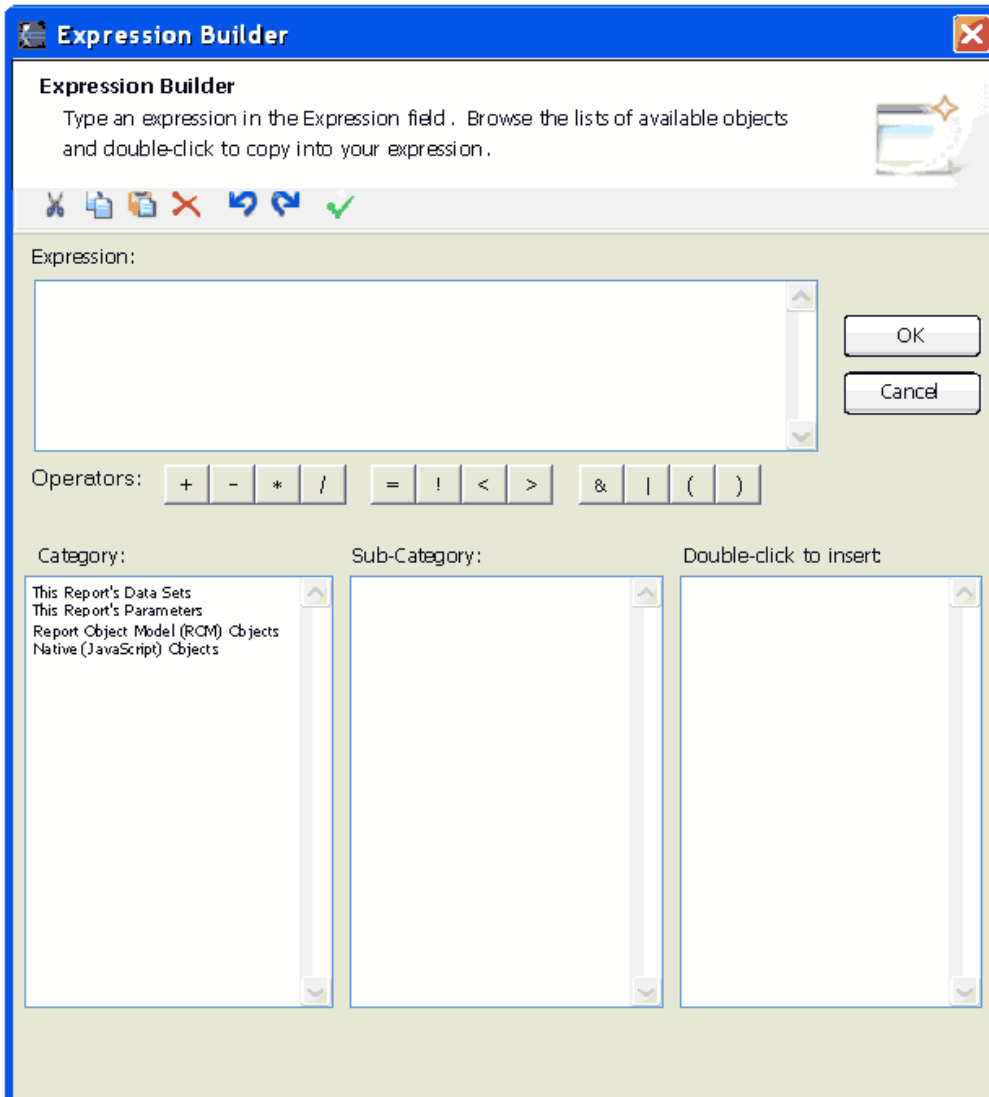
The requirement includes:

- Expression builder too confusing and intimidating.
- Improve organization of the Expression Builder.
- Cannot add Date methods within the expression builder.
- Using aggregates should be easier.

2. GUI Mockup

2.1 Expression builder dialog

The expression builder looks like this:

3. Features

3.1 Object explorer

The expression build UI provide an object explorer to help user easily find functions or constants.

3.1.1 Categories

- The report's data sets

- The report's parameters

- Report Object Model (ROM) objects

- Native JavaScript objects

3.1.2 Dynamic Content

Contents of the hierarchy of objects explorer will depend upon the selection, containership of the selection (e.g., more than one row may be in scope), and the query.

If objects or an entire sub-category is unavailable, exclude all them from appearing in the objects explorer.

Objects may not be available depending on phase and context (see ROM Expressions and Scripting Spec for details).

3.1.3 Tool tips and status line

The objects explorer provides tool tips and status line. This feature can help user get information for selected objects before they insert them into expression.

3.2 Expression editing area

The expression editing area provides basic JavaScript code editor features.

The features include:

- key words highlights
- standard object code assistant (standard functions, methods)
- general object code assistant(properties, and parameter lists)
- auto formatter
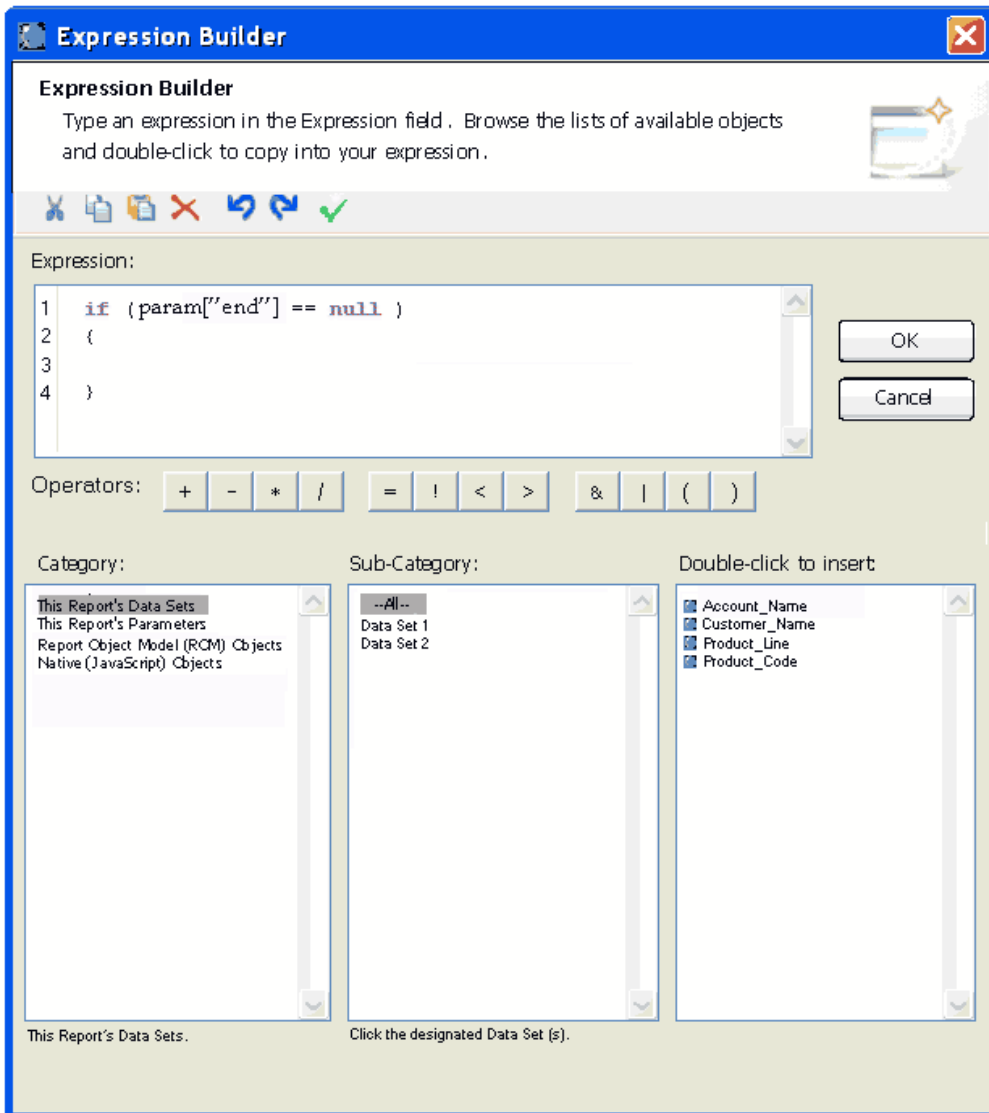- grammatical check
- line number

3.3 Toolbar

Cut, Copy, Paste, Delete, Undo, and Redo are available from the toolbar. Also common operators appear at the bottom of editing area.
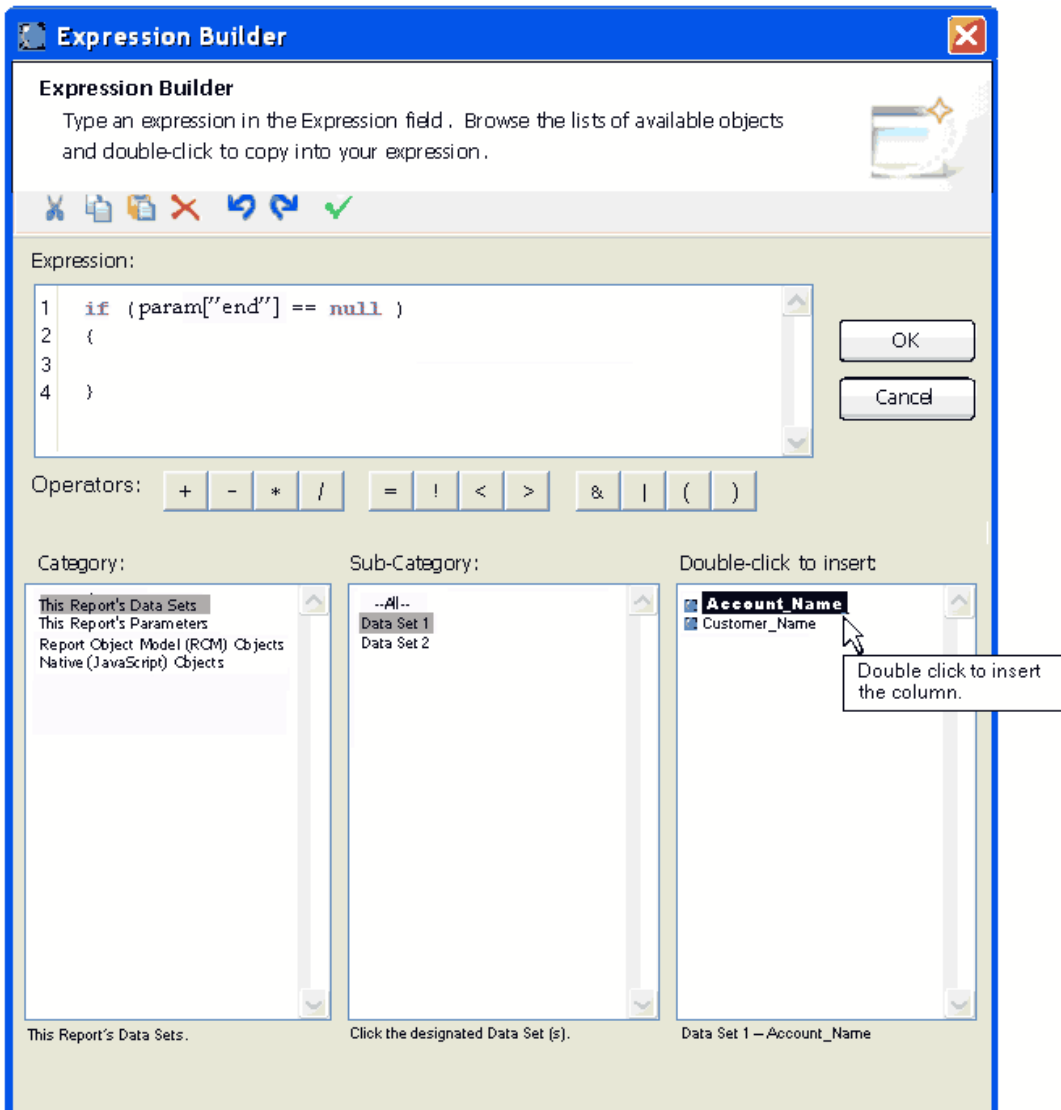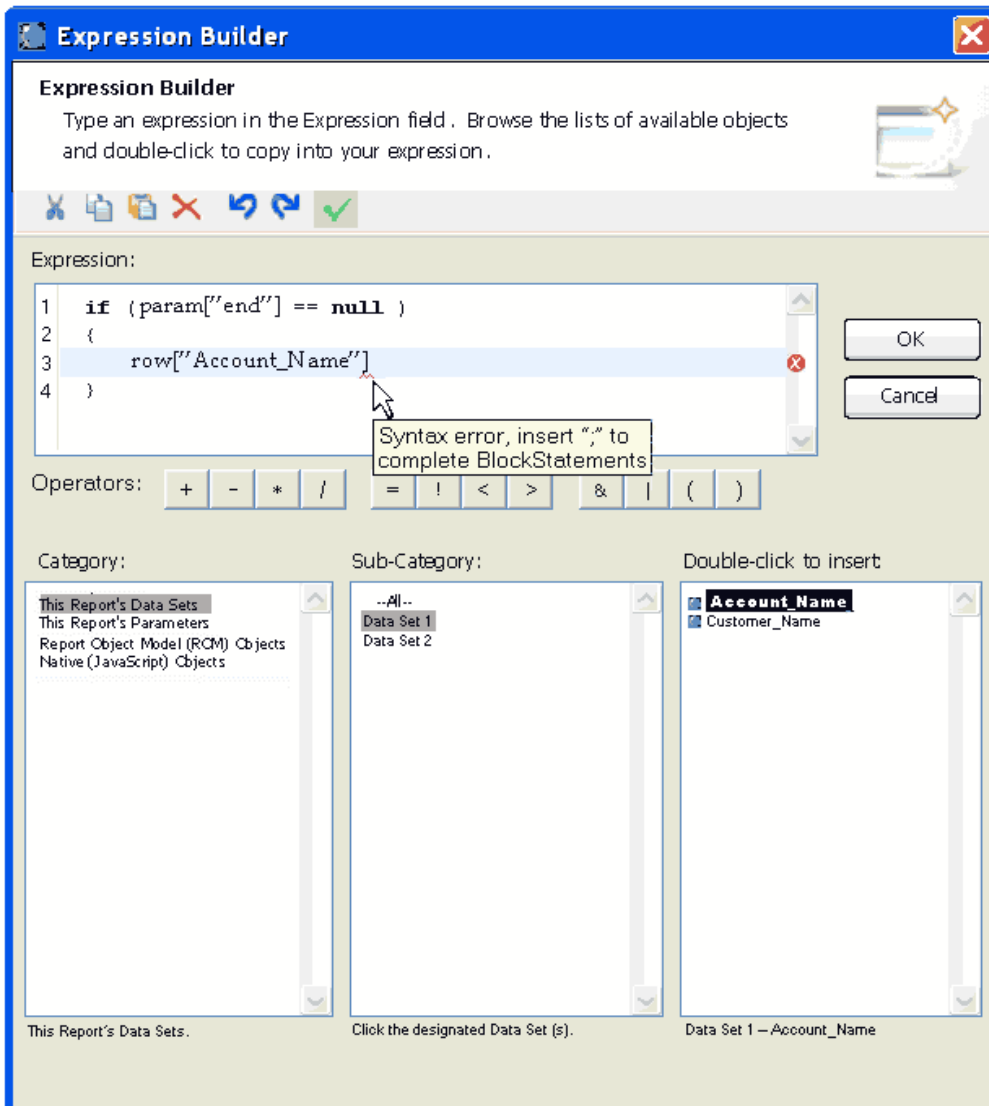
4. Use cases

4.1 Use object explorer

Step 1 select category and sub-category.

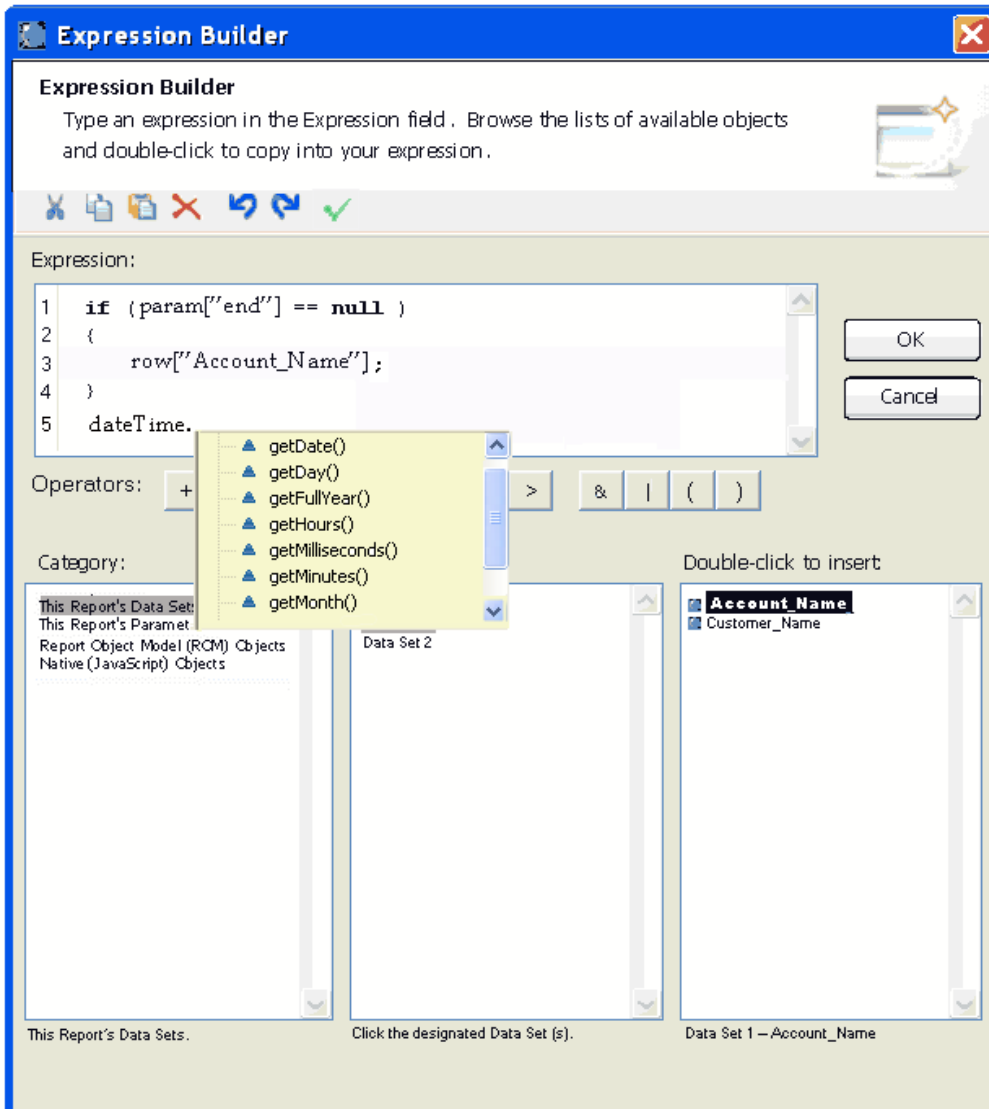Step 2 select object and get tool tips.

Steps 3 double click selected object.

4.2 Edit expression.

Step 1 type in editing area.

Step 2 check syntax of expression