BPS15 - Chart UI Usability Enhancements

Functional Specifications

Draft 1.6: Sep. 29, 2006

Abstract

This document lists a number of various enhancements of the chart builder UI in order to improve its usability

Document Revisions

Draft	Date	Primary Author(s)	Description of Changes
1.0	July 24, 2006	Yulin Wang	Initial draft
1.1	July 25, 2006	Yulin Wang	Updated some cases
1.2	July 27, 2006	Yulin Wang	Added case 2.9
1.3	July 31, 2006	Yulin Wang	Added case 2.10, 2.11
1.4	Aug. 2, 2006	Yulin Wang	Added case 2.12, 2.13
1.5	Aug. 22. 2006	Yulin Wang	Updated case 2.7
1.6	Sep.20, 2006	Nina Li	Added case 2.14
1.7	Sep 29, 2006	David Michonneau	Removed Future from Error reporting and legend interactivity. Added 2.12.3

Contents

1. Introduction....3

2. Usability enhancements mockup....3
2.1 Navigation bars for subtasks....3
2.2 UI refinement of Meter series....4
2.3 UI refinement of interactivity dialog....5
2.3.1 Auto saving for interactivity settings....5
2.3.2 Prevent adding several actions on the same event....5
2.4 UI refinement of Legend....6
2.4.1 Easy to hide Legend block....6
2.4.2 Add format specifier of base series....7
2.5 UI refinement of Axis title/label....7
2.5.1 Easy to make Axis title visible....7
2.5.2 Easy to rotate/stagger Axis label....8
2.6 UI refinement of popup dialog....8
2.7 UI refinement of hyperlink builder....9
2.8 Script editor in chart builder (Future)....10
2.9 Saving temporarily in chart builder....10
2.10 UI refinement of group....11
2.11 Support of format preview....11
2.12 UI refinement of Axis type....12
2.12.1 Consistency of Format data type with Axis type....12
2.12.2 Removing unsupported choices in Y axis....12
2.13 New error reporting mechanism....13
2.14 Legend Interactivity URL Parameter....13

1. Introduction

There are some usability issues in chart builder baffling users making full use of chart functionality. The goal of this spec is to create some mockups to illustrate how to resolve these issues in BIRT V2.2.

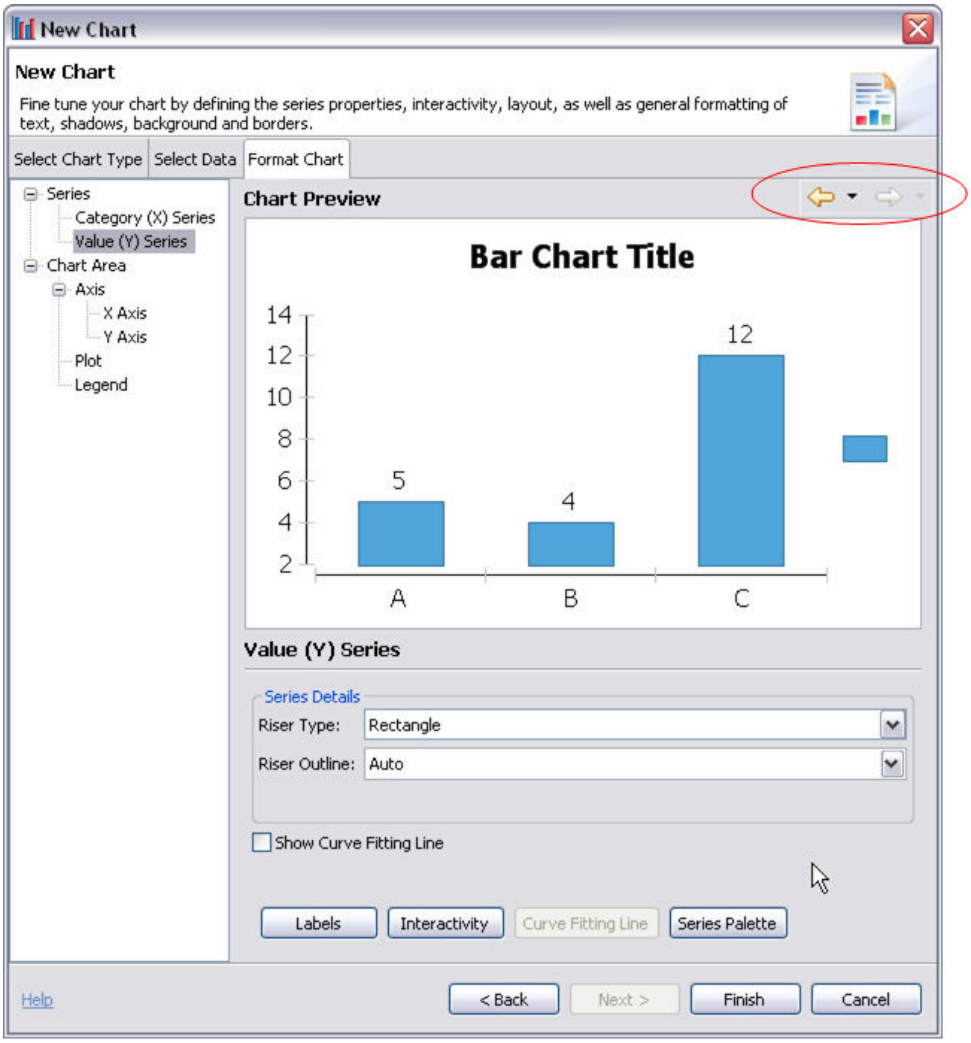
2. Usability enhancements mockup

2.1 Navigation bars for subtasks

Description: Add a navigation bar for the subtasks in format chart tab. The navigation bar includes two buttons with drop-down list for moving forward or backward the subtask selection separately. If clicking the arrow-down button of the bar, user can see the history list of the subtask selection.

If some history entries are out of date (e.g. Axis subtask won't exist in pie chart), they will display "#Invalid" and do nothing when being clicked in the drop-down list, or be skipped when being clicked in the button.

Screenshot:

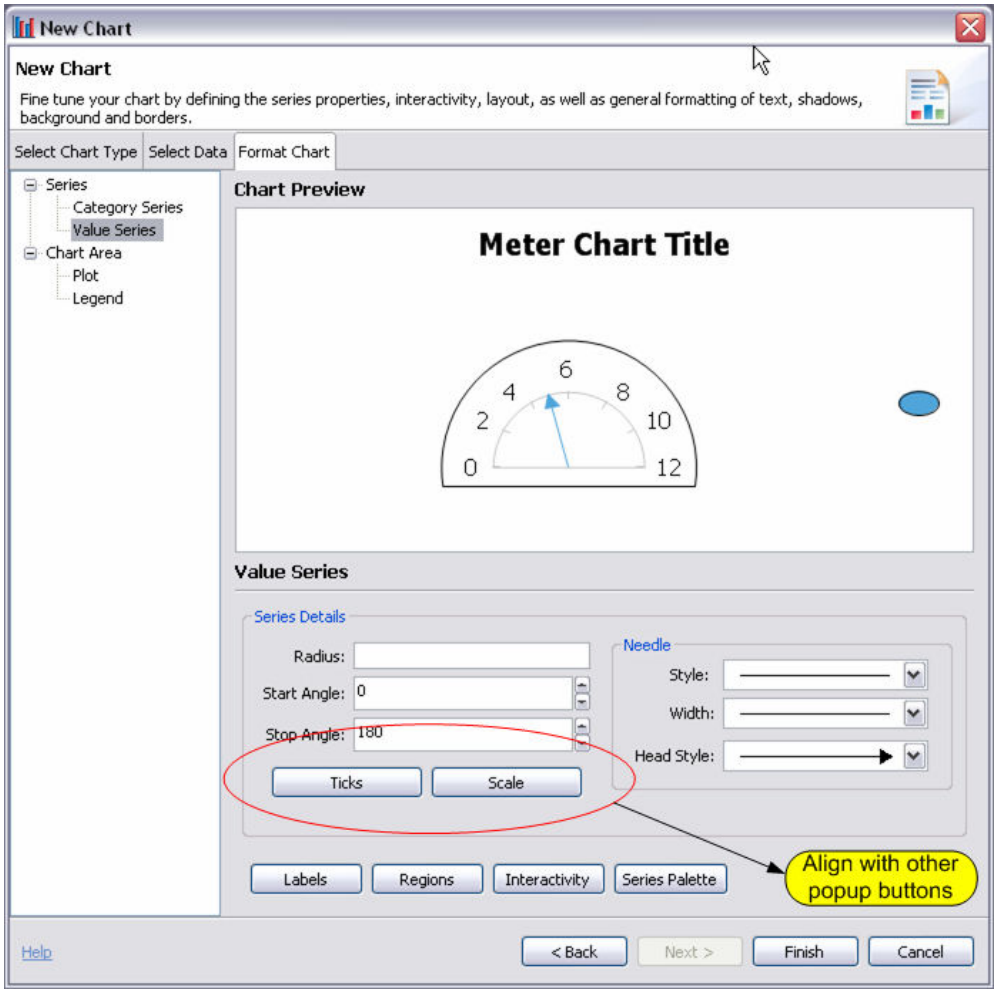


2.2 UI refinement of Meter series

Description: Move “ticks” and “scale” buttons into popup buttons bar, and make the dialogs act as other modeless pop-ups as well.

Besides, move "minor grid count" from scale sheet to ticks sheet, since it's related with minor ticks.

Screenshot:



2.3 UI refinement of interactivity dialog

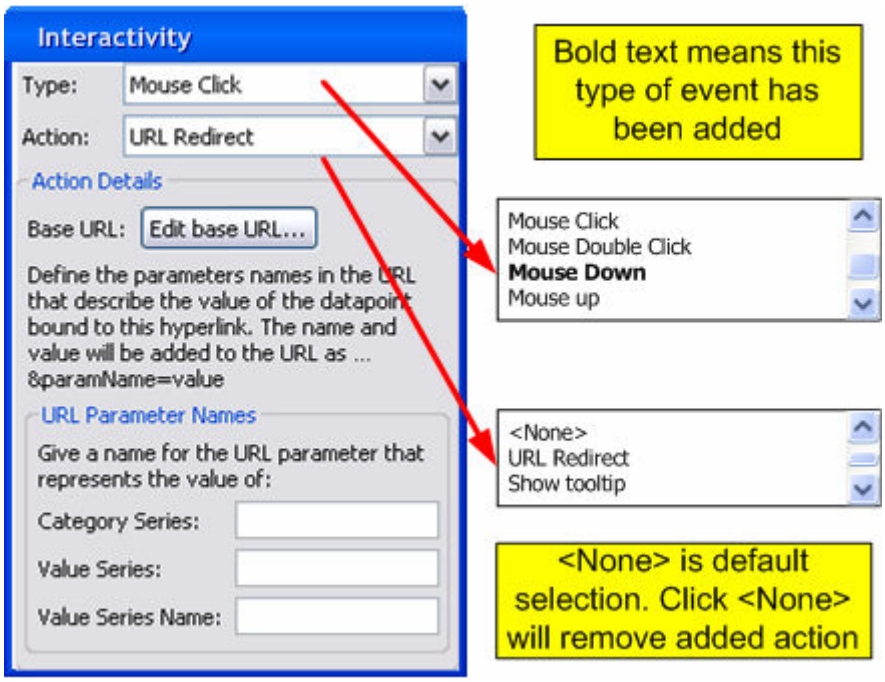
2.3.1 Auto saving for interactivity settings

Description: Currently, users have to click “update” button to update interactivity settings. Users usually forget to click this so that they will lose the change. In V2.2, all settings in interactivity dialog will be saved automatically once they are changed.

2.3.2 Prevent adding several actions on the same event

Description: Currently, several actions on the same event are not supported in chart engine, so if users added one interactivity action and selected a event of the same type, Add button will be disabled.

Screenshot:

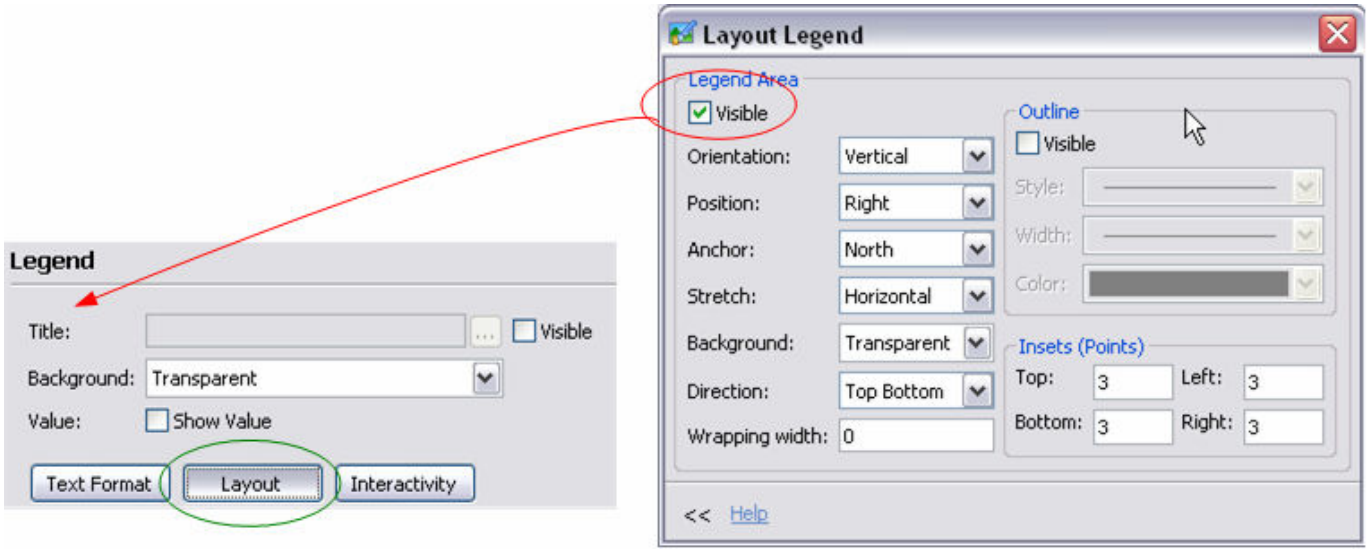


2.4 UI refinement of Legend

2.4.1 Easy to hide Legend block

Description: As a common block, Legend is supposed to hide/display easily. It's better to display the checkbox for Legend visibility in the Legend subtask.

Screenshot:

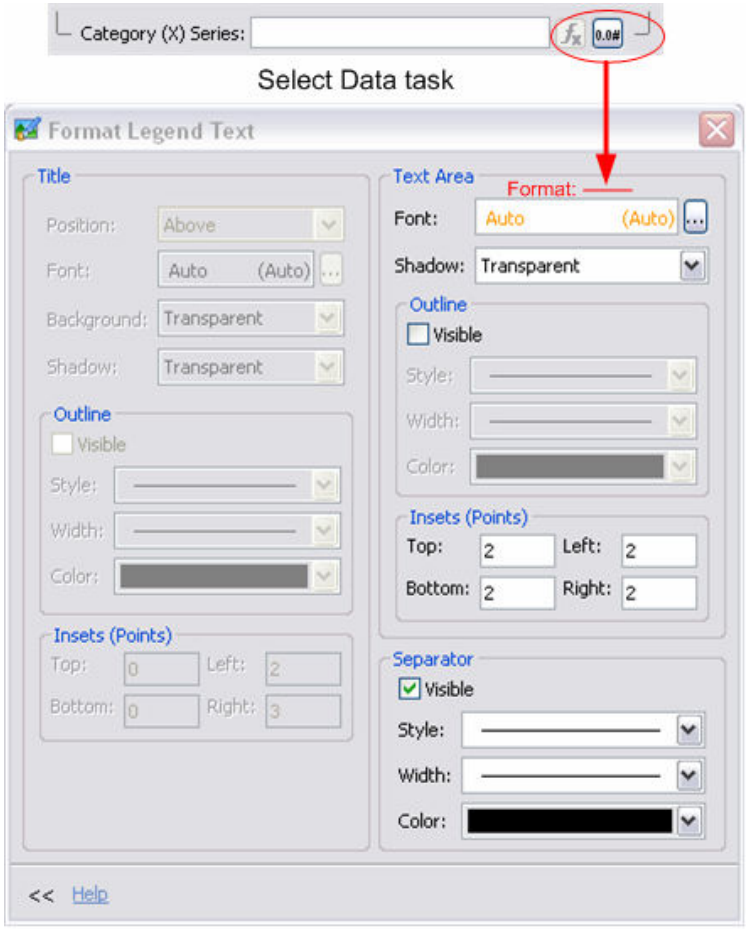


2.4.2 Add format specifier of base series

Description: Format specifier of base series is applied to category values of Legend, so it's better to display it beside Legend text area.

Please note that this attribute is only available when users have set "color by" as "categories" in Series subtask. It will be disabled if the format specifier is invalid.

Screenshot:



Text Format of Legend subtask

2.5 UI refinement of Axis title/label

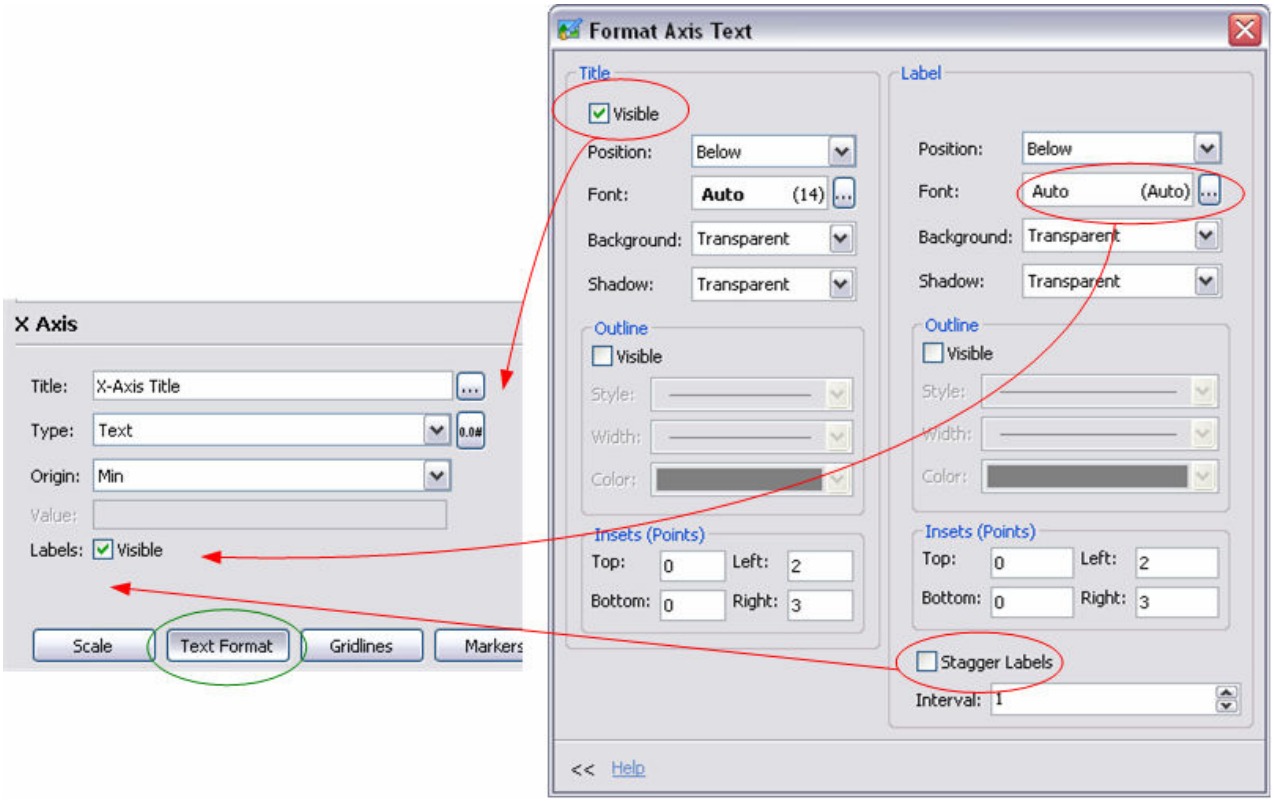
2.5.1 Easy to make Axis title visible

Description: In X/Y/Z axis subtask, Axis Title is invisible by default, so the change to Title text is not obvious in chart preview. It's better to display the checkbox for Axis Title visibility in X/Y/Z axis subtask. If Axis Title is invisible, Title text will be disabled.

2.5.2 Easy to rotate/stagger Axis label

Description: Move font button of Axis Label and stagger checkbox from popup to Axis subtask.

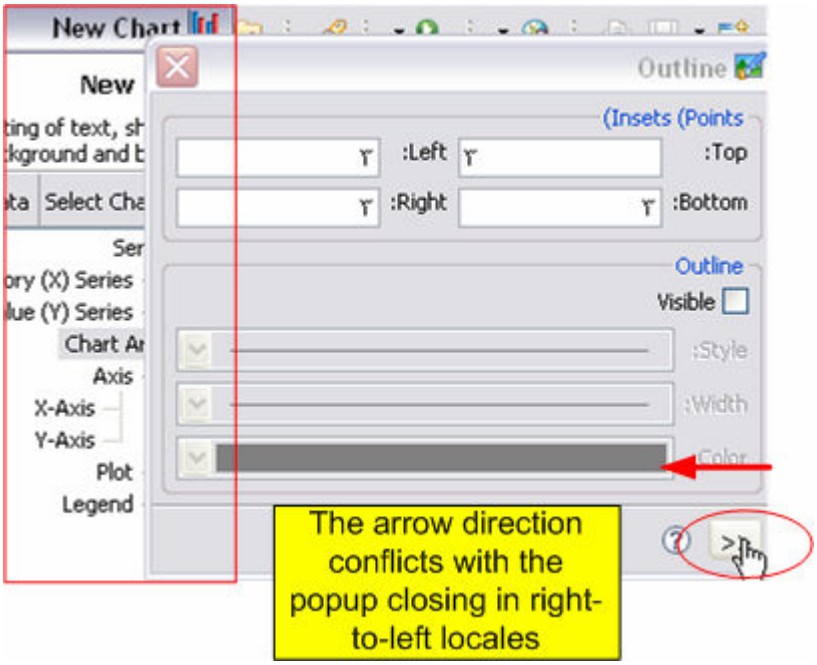
Screenshot of 2.5:



2.6 UI refinement of popup dialog

Description: Currently, the close button of popup dialog uses the arrow character. In right-to-left locale, these characters will be changed according to the direction, but they conflict with the real location of the dialog. It's better to use a static icon to replace the character.

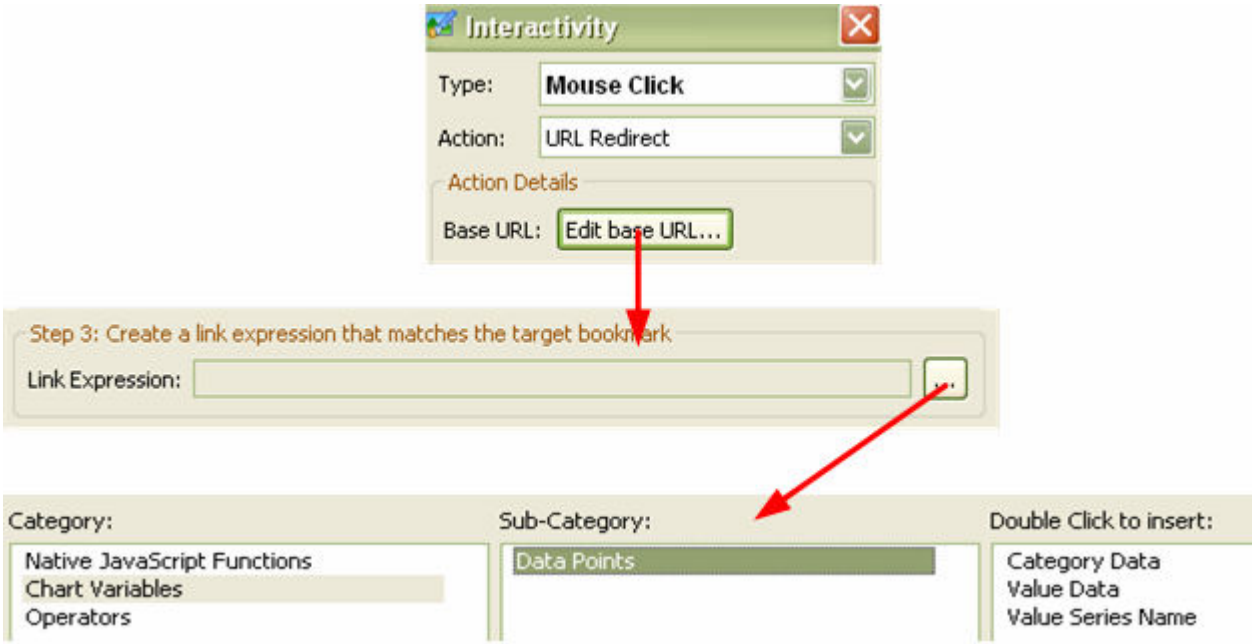
Screenshot:



2.7 UI refinement of hyperlink builder

Description: When editing base URL in URL redirect action of interactivity dialog, it's hard to input an expression with chart variables. Enhance the expression builder inside hyperlink builder by adding the category "chart variables" in it.

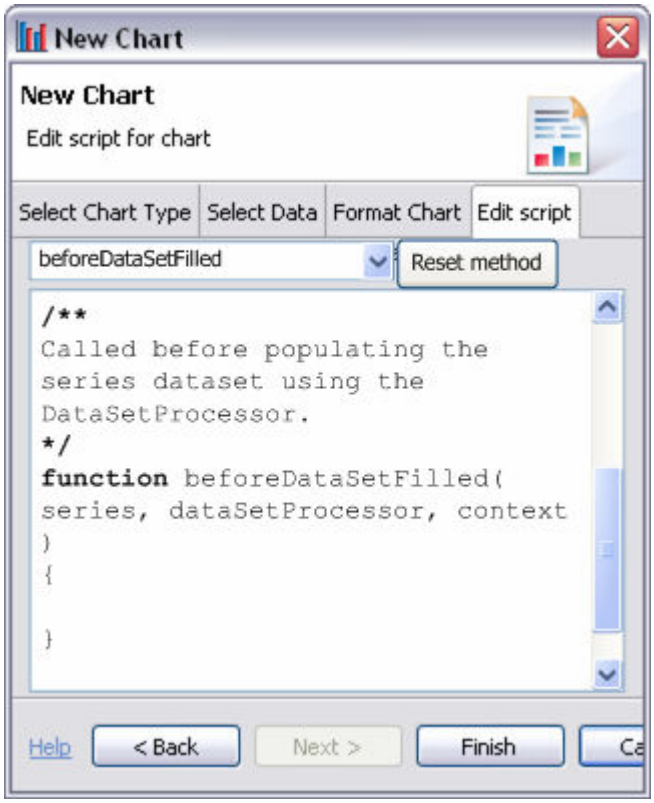
Screenshot:



2.8 Script editor in chart builder (Future)

Description: Currently, users have to edit script outside the chart builder. Besides of inconvenience, if editing chart in standalone mode, users are unable to edit script for chart. It's supposed to add a script editor in chart builder. The script editor may provide such functionalities: highlight, code assistance…

Screenshot:



2.9 Saving temporarily in chart builder

Description: Currently, chart model is only saved when finishing the chart builder. If users want to save some settings before further operations, they have to close the chart builder. Otherwise, if having some mistakes, they may lose all settings by canceling chart builder. Adding the "Apply" button to save chart temporarily can solve this issue. If pressing the "Apply" button, setting some chart attributes, and pressing "Cancel", chart builder will rollback the chart model to the last point pressing "Apply".

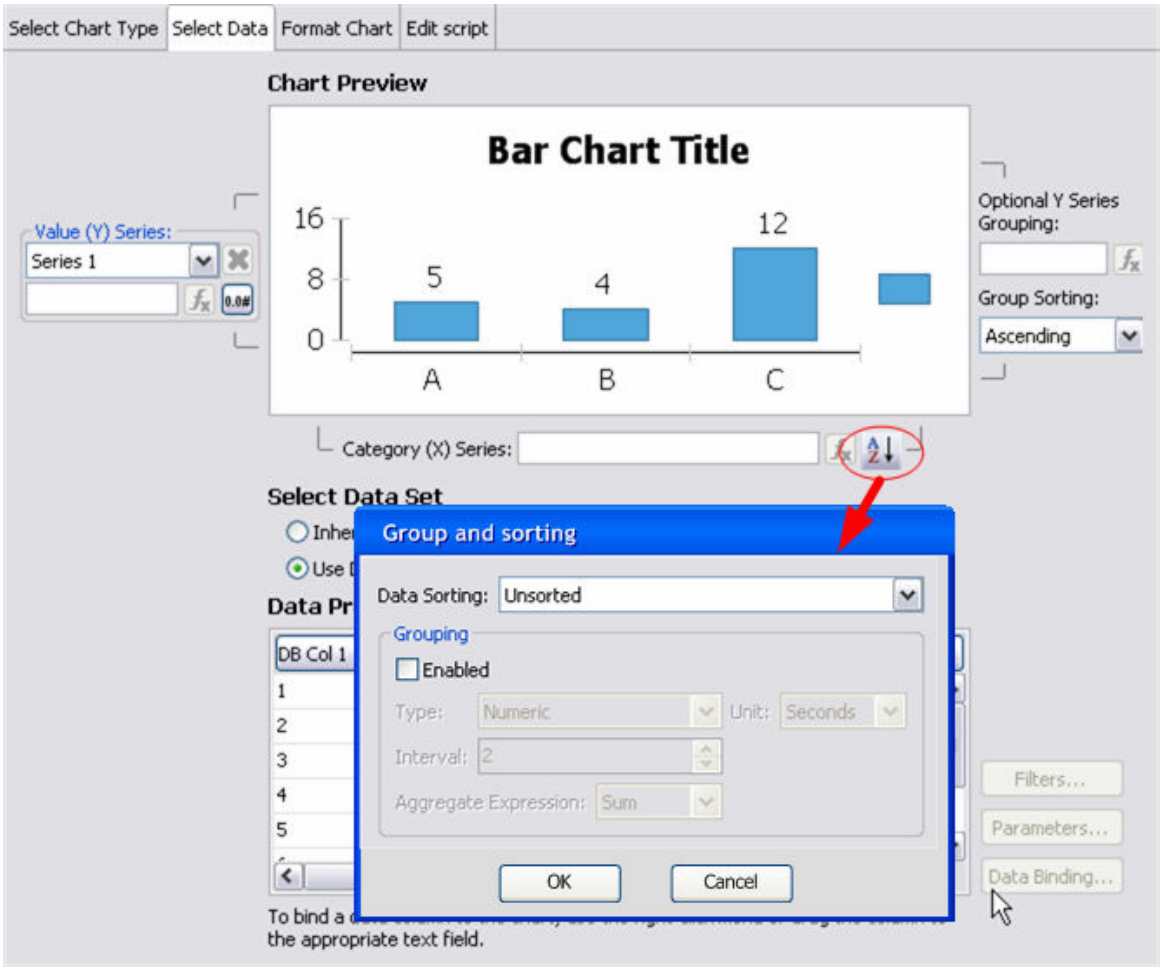
If current chart is not modified yet, "Apply" button will be disabled.

Screenshot:

2.10 UI refinement of group

Description: Group and sorting are date related. Better to display it in “Select Data” task. (Replaced button of format specifier is moved to being beside Legend text area. Please see it in 2.4.2)

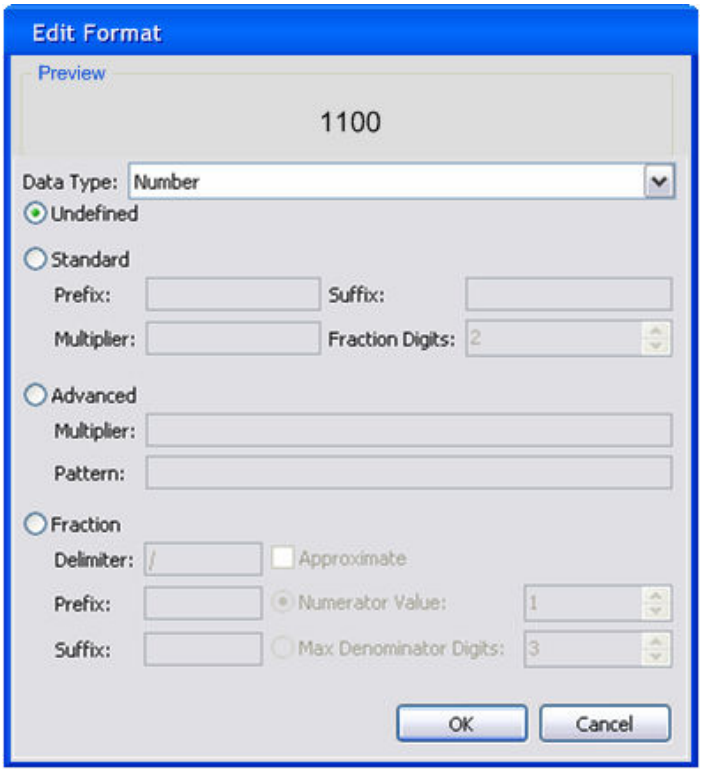
Screenshot:



2.11 Support of format preview

Description: Preview current format setting when users are editing.

Screenshot:



2.12 UI refinement of Axis type

2.12.1 Consistency of Format data type with Axis type

Description: Main idea is to add constraints of Format data type to force keeping the data type consistent with Axis type. “Data type” combo in format specifier dialog only contains supported type items according to following support matrix.

Format type \ Axis type	Linear/ Logarithmic	Datetime	Text
Number	√	×	×
Date/Time	×	√	×
String(future)	×	×	√

Additionally, if users selected different axis type after updating format specifier, the former format attributes of axis will be cleaned, as well as the format attributes of Marker Line/Marker Range of current axis.

2.12.2 Removing unsupported choices in Y axis

Description: Text axis type will never be supported in Y axis, so remove this choice.

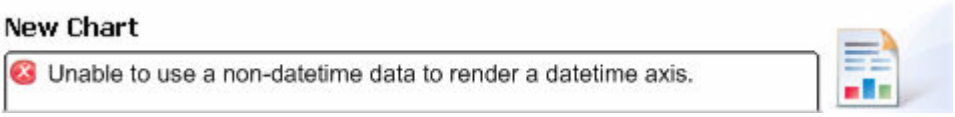
2.12.3 Automatic Axis type selection

Description: When an expression is bound to a Series, the Axis type will automatically change to fit the expression value type. This applies to both X and Y Axes and also takes the grouping aggregate function into account.

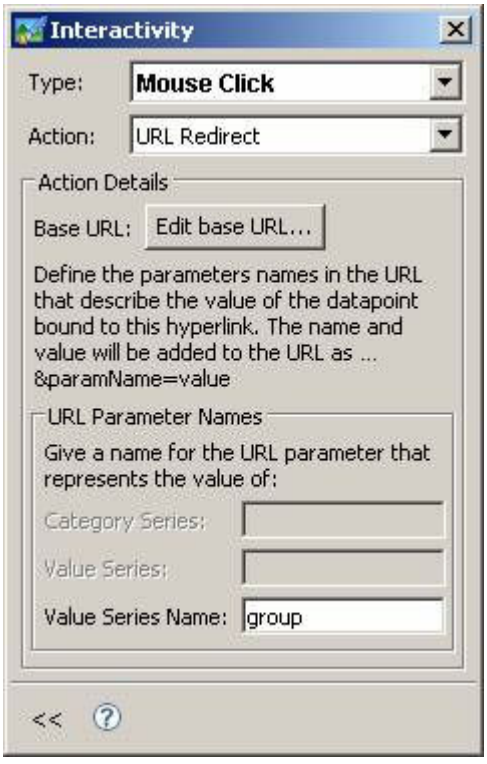
2.13 New error reporting mechanism

Description: Adopting eclipse wizard framework to report error message in chart builder. When exception is thrown from chart engine or else, chart build will display the error message in the message area.

Screenshot:



2.14 Legend Interactivity URL Parameter

Description: Enable the SeriesValue parameter particularly for legend interactivity, for when rendering the legend entry, it will know which series it belongs to. So the user can access this value via url parameter. The change only affects the legend interactivity.

Screenshot: