Web Application Design: BEx Web Application Designer

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Release 30B

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Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Typographic Conventions

Type Style	Description
Example text	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options.
	Cross-references to other documentation.
`Example text`	Emphasized words or phrases in body text, titles of graphics and tables.
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.
`Example text`	Screen output. This includes file and directory names and their paths, messages, source code, names of variables and parameters as well as names of installation, upgrade and database tools.
`EXAMPLE TEXT`	Keys on the keyboard, for example, function keys (such as `F2`) or the `ENTER` key.
`Example text`	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example text>`	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.

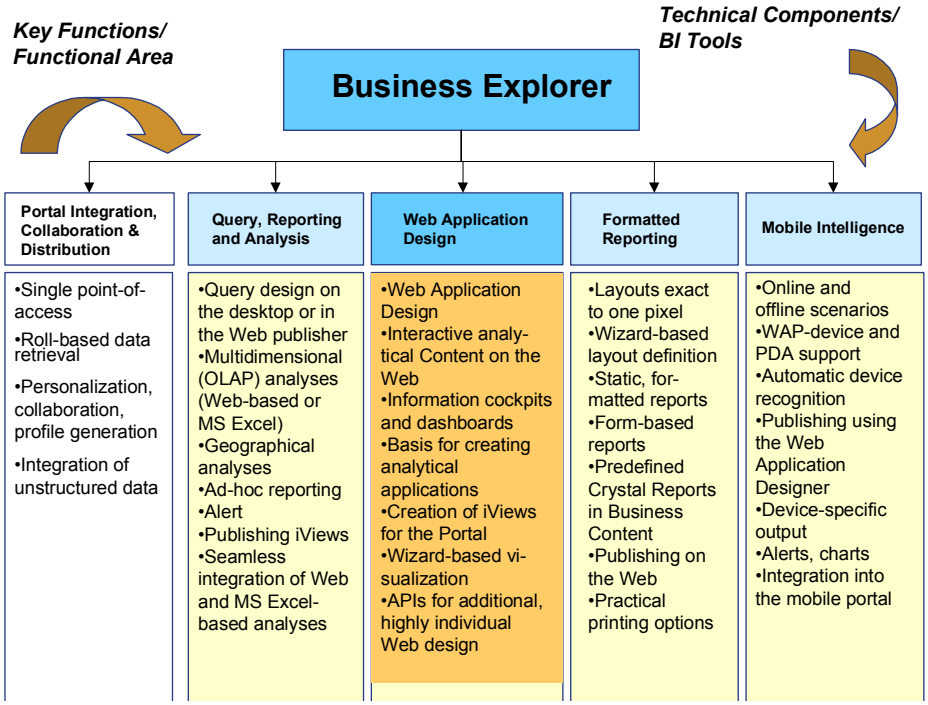
Web Application Design: BEx Web Application Designer

Use

Web application design allows you to use generic OLAP navigation for your BW data in Web applications as well as in business intelligence cockpits for simple or highly individual scenarios.

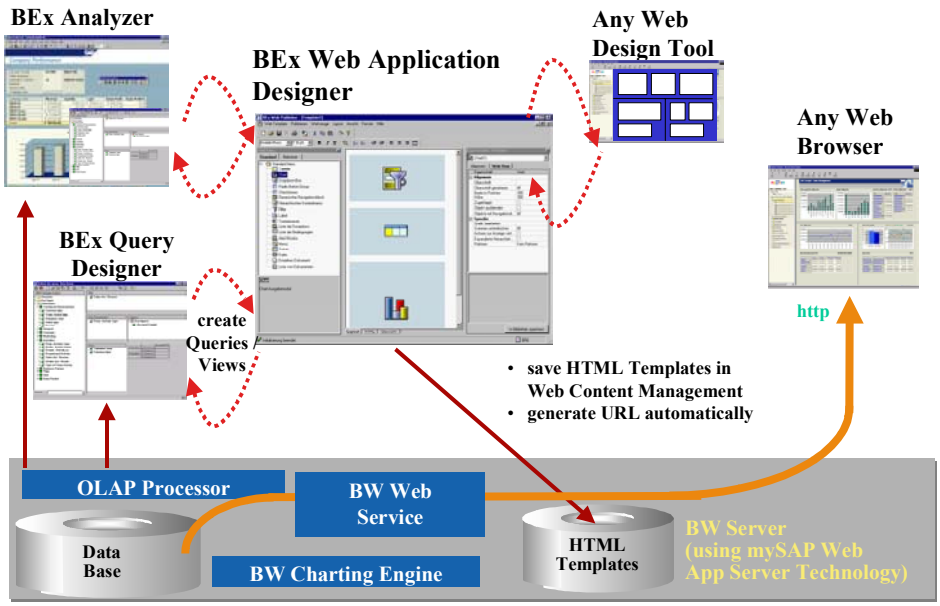
Integration

The following graphic shows Web application design as a central functional area of the Business Explorer:



Funktionsumfang

The following graphic illustrates the basic concept of Web Application Design with the Web Application Designer as the central tool:



Usingthe BEx Web Application Designer [Seite 14], the desktop application for creating Web applications, you can create HTML pages that have BW-specific contents such as tables, charts or maps. These objects, which retrieve BW data from a data provider and place it in a Web application as HTML, are known as Web items. For more information on the Web items available, see Web Items [Seite 36].

You can save the Web applications as a URL and access them from an intranet or on mobile devices. In addition, you can save Web applications as iViews and integrate them into an enterprise portal.

The Web application wizard [Seite 21] is an assistant that is integrated into the Web Application Designer. You can use this to help you create Web applications using a step-by-step procedure and to simplify design activities. The Web application wizard helps you to work with Web application design confidently and create your first Web applications.

Business Explorer Web application design also allows you to create highly individual scenarios with user-defined interface elements by using standard markup languages and Web design APIs. You can adjust and enhance Web templates [Seite 225](the HTML pages that determine the structure of Web applications) individually. For further information, see:

Object Tags [Seite 227]

Command URLs [Seite 231]

Using Forms [Seite 262]

Data Provider [Seite 268]

Query Views [Seite 270]

Using JavaScript Functions [Seite 318]

In addition, using a Web design application programming interface (Web design API), you can change the display of tables or navigation blocks in Web applications. See Web Design API for Tables [Seite 338]

Web application design comprises a broad spectrum of Web-based business intelligence scenarios, which you can adjust to meet your individual needs using standard Web technologies.

BEx Web Application Designer

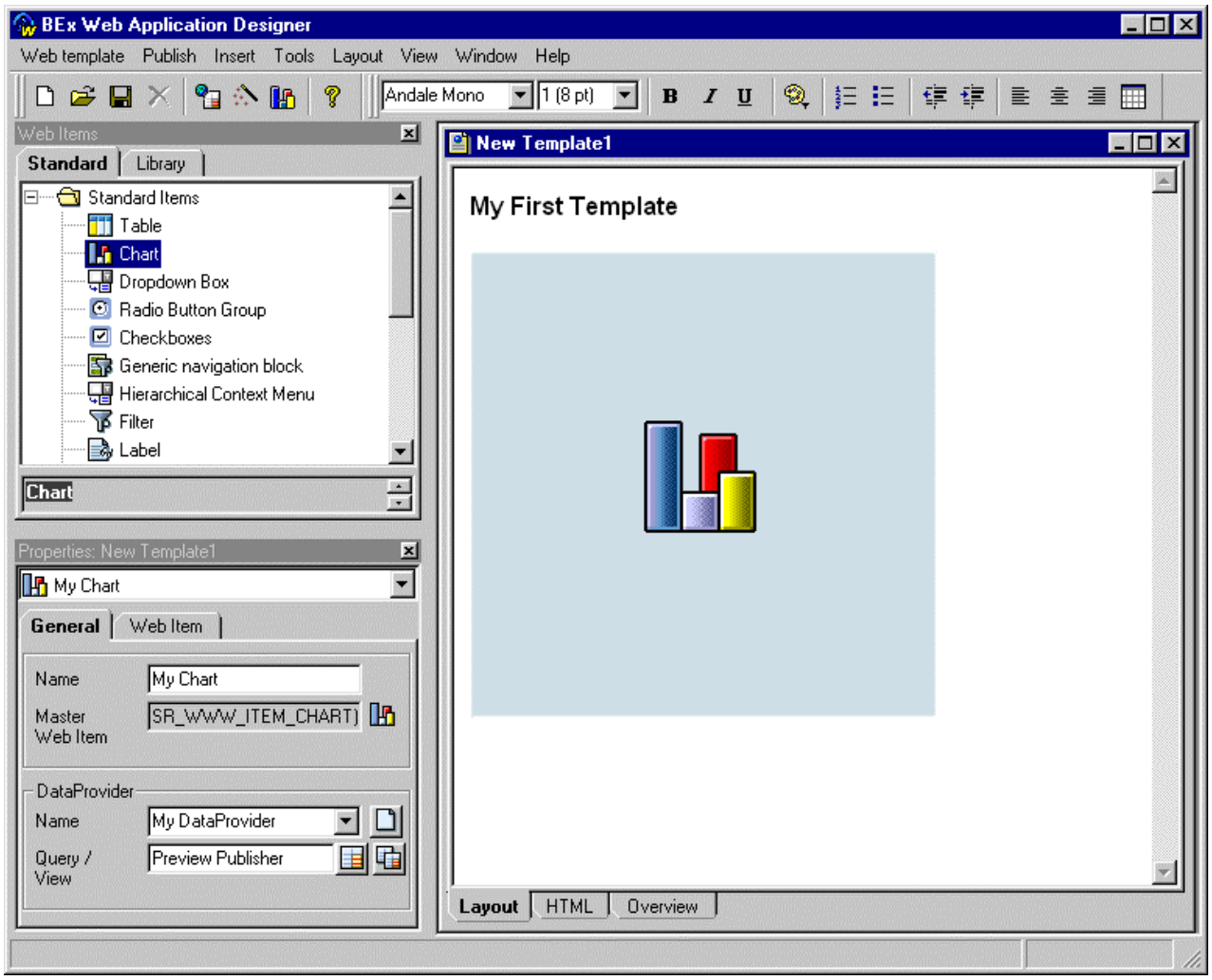
Definition

The BEx Web Application Designer is a desktop application for creating Web applications with BW-specific contents. Using the BEx Web Application Designer, you create an HTML page that contains contents such as various tables, graphics or maps. This HTML page (shown below as a Web application) provides the basis for not only Web applications with complex interaction, but also for Web cockpits and iViews.

Use

For a detailed guide explaining how to create Web applications, see Creating Web Applications with the BEx Web Application Designer [Seite 17] or, if you are creating a Web application for the first time, see Creating Web Applications with the Web Application Wizard [Seite 21]. You can find background information under From Web Template to Web Application [Seite 26].

Structure



As well as menu bars and application toolbars, the BEx Web Application Designer consists of three basic screen areas:

- The *Web Items* window
- The *Template* window
- The *Properties* window

The *Web Items* Window

The *Web Items* window offers a pool of Web items [Seite 36] that you can use to create your Web application.

A Web item is the visualization type (for example, tables, maps, graphics) used to display data from a data provider [Seite 268].

The window is made up of two areas:

- In the top part of the window, divided onto two tabstrips, are the selection option categories for Web items.
  - Selection from master Web items
  - Selection from Web items saved in the library. See also Working with the Library for Web Items [Seite 33].

    You can create documents for your library, or display or edit existing documents. To do this, choose the *Library* tab page from the *Web Items* window. Choose context menu → *Open Library.* Select the library that is opened and, using the context menu, choose *Documents*. You can find additional information under Documents [Extern] and Creating Documents [Extern].

    You can create documents for each individual Web item in your library and display or edit existing documents. To do this, open the library as described above, select a Web item and, using the context menu, choose *Documents*.

- Below the document selection, you see the help area with descriptive text for the Web item that you selected in the above area.

The Template Window

The *Template* window contains the Web templates that you edited in the design process and that form the basis for your Web applications.

The HTML page published on the Web is called a Web application. A Web template [Seite 225] is the HTML page that you use to determine the structure of the Web application.

At the bottom of the *Template* window there are three tab pages that you can use to change the view of the template or the current HTML editor.

- *Layout*

  You determine the layout of the Web application in the layout view. See Designing the Layout of Web Templates [Seite 30] for the available options.

- *HTML*

  The HTML view displays the HTML that corresponds to the layout view

In the HTML view, the syntax is colored.

Syntax element	Color
Comment	gray
HTML	blue
String constants	black
BW-specific contents such as BW object tags, SAP BW URLs, SAP BW texts	red

In the HTML view, you can edit the HTML of a Web template directly. Alternatively, you can also edit the HTML with an external HTML editor. You can find additional information about editing HTML under Creating Web Applications with the BEx Web Application Designer [Seite 17].

- *Overview*

  In the overview view, all of the Web items are listed with information about the master Web item, the data provider and the query or view.

  You can create documents for Web templates or display or edit existing documents. To do this, choose *Web Template* → *Documents.* You can find additional information under Documents [Extern] and Creating Documents [Extern].

The Properties Window

In the *Properties* window, you define the properties of Web templates and Web items. It is divided into three areas:

- In the header of the window in the dropdown box, you see the selection for which you want to define properties – for the Web template or for specific Web items.
- In the middle area, you specify the properties for Web templates or for specific Web items – depending on the dropdown box settings.
- The lower screen area displays context-sensitive help.

Creating Web Applications with the BEx Web Application Designer

Use

You can use the BEx Web Application Designer to create a BEx Web application (an HTML page with BW-specific content) quickly and easily.

You can find background information on the following steps under From Web Template To Web Application [Seite 26].

We recommend that you create your first Web application with the BEx Web Application wizard in order to familiarize yourself with the Web Application Designer. See Creating Web Applications with the Web Application Wizard [Seite 21].

Procedure

1. Create a Web template

   To create a new Web Template [Seite 225], choose or *Web Template* → *New*. (When you start the Web Application Designer, a new Web template is created).

2. Insert a Web item [Seite 36]

   a. Drag a Web item from the *Standard* tabstrip of the *Web Items* window and drop it into the Web template. The Web item appears in the Web template.

      When you select a Web item from the *Web Item* window, you get an explanatory text in the area underneath the Web item.

   b. Give the Web item a name by overwriting the default text under *Name* on the *General* tab strip in the *Properties* window.

3. Set the data binding.

   a. In the *Properties* window, on the *General* tab page, in the *DataProvider* area, describe the data provider [Seite 268]. Overwrite the existing text under *Name*, or select a new data provider using the pushbutton and overwriting the proposed text.

   b. Select a query with or a view with respectively to assign a data provider to the Web item.

      To create a new query, call the Query Designer by choosing *Tools* → *Query Designer*

      To create a view on the basis of a query or another view, choose *Tools* → *View Definition* → *Based on a Query* or *Based on Another View.* In the *BEx Open* dialog box, select an existing query or an existing view. The standard template appears in a separate browser window. Define your view there, enter the *Description* and *Technical Name* and choose *Save View.* You can now use this view as a data provider.

4. Make settings for the Web items.

a. In order to make special settings for the Web item, choose the tabstrip *Web Item*.

For the chart and map Web items, you can also call up the dialog for changing attributes using the symbols or on the toolbar.

b. Specify the properties by

- Selecting the relevant checkbox
- Manually entering a value (for example, with *Heading*)
- Manually changing the default value
- Double-clicking the default value and choosing another value from the dropdown box that automatically appears
- Choosing values from a list
- Creating values in a list in tabular form

Click on each property for a description of the individual properties. The descriptions are shown in the area underneath the properties.

5. Add further Web items.

Repeat steps 2 – 4 to integrate further Web items.

Note the position of the cursor in your template when adding further Web items. The cursor position determines where the new Web item is added. See also Designing the Layout of Web Templates. [Seite 30].

Make sure that you execute the data binding and Web-item-specific settings for the correct Web item. To make changes to a Web item, select the item in the layout view. In the header of the *Properties* window, the system displays the Web item for which you can change the settings. As an alternative to selecting the individual Web items, you can use the dropdown box to toggle between the properties of individual Web items.

6. Design the layout of the Web template

In the Web Application Designer, you can create your Web template in the same way as in familiar HTML editors. See also Designing the Layout of Web Templates. [Seite 30].

7. Change the Web template properties.

To change the Web template properties, select the Web template in the header of the *Properties* window from the dropdown box. See Determining Web Template Properties [Seite 28], for a description of the settings you can make.

8. Store and execute the Web template

a. To save your Web template, choose or *Web Template → Save.*

b. To view your Web application in the Browser, choose or *Web Template → Publish in Browser.*

You have to save the Web template before publishing it on the Web. You are therefore asked to save the template when you execute it, if you have not already done so. See also From Web Template to Web Application [Seite 26].

To assign a Web template to a role, choose *Publish* → *In Role...*

To place the URL of a Web template on a clipboard, choose *Publish* → *Copy URL to Clipboard.* To do this, you must have saved the template once already.

Result

The browser is started and the Web application you created is opened.

If you want to print your Web application, you can enter a print stylesheet for the respective Web template. You can see the selection of print stylesheets only in the HTML view. For further information, see Print Stylesheets [Seite 224].

Processing Web Templates Further

You have the following options for editing the HTML source of a Web template:

1. You can edit the Web template **directly** in the HTML view of the Web Application Designer. To do this, in the Web Application Designer *Template* window, choose the *HTML* tab.
   - Edit the HTML.
   - Choose *Undo* in the lower-right area of the *Template* window in order to withdraw the changes you have made.

     or
   - To check the edited HTML, in the lower right area of the *Template* window, choose *Validate.*

     The changes made to the Web template are not transferred to the Web template at this stage.

     The system starts the Web template validation **automatically** when you:

   a. Choose the *Layout* or *Overview* tab.

   b. Change the properties in the *Properties* window on the *Web Item* tab.

   c. Save the Web template

     The *Web Application Designer* dialog box appears. This is where you are asked to transfer the HTML changes or correct any errors.

   - Choose *Yes* if you want to transfer the changes to the Web template permanently.

     The changes are transferred into the Web template.

     or
   - Choose *No* to reject the changes.

     or

- Choose *Cancel* to continue editing the HTML.

2. You can also edit the Web template with an external HTML editor.

   - To process a Web template further using an external HTML editor, choose *Web Template* → *Export to File...* Your Web template, that is the HTML file, is stored on a file system of your choice. You can call it up from there with your HTML editor.

     If you have selected an HTML editor in the Web Application Designer using *Tools* → *Settings*, this is started automatically.

   - To call up a Web template that you have edited in the HTML editor (that is, the edited HTML file) in the Web Application Designer again and edit it there, store the file on your file system again. In the Web Application Designer, choose *Web Template* → *Import from File...* and specify the names and location of the saved file.

   - To download a Web template directly from the server, that is, without opening the Web Application Designer, choose *Web Templates* → *Download File from Server.* The Web template (the HTML file) is stored on your file system.

   - To upload a Web template that you edited in an HTML editor directly to the server, that is, without opening it in the Web Application Designer, store the file on your file system again. In the Web Application Designer, choose *Web Template* → *Upload File to Server* and specify the name and location of the saved file.

Creating Web Applications with the Web Application Wizard

Use

You can use the Web application wizard to create a Web template quickly and easily. You can publish this template as a Web application in the Internet browser. The Web template is an HTML document with BW specific placeholders that determines the structure of a Web application.

You can use the Web application wizard to create Web templates but not change them. If you want to change your Web template, you use the Web Application Designer. See Creating Web Applications with the BEx Web Application Designer [Seite 17].

Prerequisites

You have called up the BEx Web Application Designer.

Procedure

1. Choose or *Tools* → *Wizard,* to call up the Web Application Designer.
2. Select a Web item from the list and choose *Next.*

   The Web item determines how the source data is displayed. Using different Web items, you can visualize your data in different ways. For example, you can display your data in a table, in a chart or in a map. The dropdown box, checkboxes, and radio button group Web items are used to filter characteristic values. You can find additional information about the Web items available under Web Items [Seite 36].
3. Select a query or a query view.

   In the DataProvider field, either select a DataProvider using input help or use for a new DataProvider. The DataProvider provides data for one or more Web items.

   You can select either a query or a query view as a DataProvider for the Web item. Choose either *(Select Query)* or (*Choose View)*. This brings you to the *Open Query / View* dialog box.

   From here, select the required query or query view from your history, favorites, or roles. Choose *Next*.

   You can also manually alter the name of the Web item here. The name identifies the Web item within the template.
4. Set the attributes for the Web item. You can edit the attributes by:
   - Selecting the checkbox
   - Manually entering a value (for example, with *Heading*)
   - Manually changing the default value
   - Double-clicking the default value and choosing another value from the dropdown box that automatically appears
   - Choosing values from a list
   - Creating values in a list in tabular form

   Choose *Next*.

5. Arrange the Web items that you created in the list.

   The sequence of Web items in the list is the same as the sequence of Web items in the Web application.

   Use the two arrow buttons on the right-hand side to change the order of the Web items. Here you can also

Delete Web items	Select the Web item you want to delete and choose *Delete.*
Add a new Web item	Choose *Add Item.*
Edit Web items	Select the Web item you want to edit and choose *Back.*

6. Before saving the Web template, you can make the following settings:

   – Use the pushbutton next to the *Stylesheet* field to choose the stylesheet that you want to use for your Web application. The *Choose Stylesheet* dialog box appears. Select a stylesheet from the list. If you would rather use a stylesheet that is not on the list, one that is on your Web server, for example, mark the checkbox and enter the URL. Choose *OK*.

   – If you select *Display Variables*, a variables screen appears in the Web application, from which you can select the required values. If you do not select *Display Variables*, the Web application is displayed without a variable screen.

   – If you select *Status-free Navigation*, the system closes the connection to the server. This means you do not use any of the server's storage capacity. If you then navigate in the Web application, the connection to the server is reopened and remains open for the duration of the navigation. If you do not select *Status-free Navigation*, the system maintains the connection to the server.

   – Choose *Settings* to do the following:

   a. In the *General* tab page, you can change the stylesheet that is used to format the Web application or set the default stylesheet.

      Choose the pushbutton with the three dots (*Change Settings).* The *Choose Stylesheet* dialog box appears. Proceed as outlined in step 6 above.

   b. In the *Directories* tab page, you can change the following path specifications

      - Path for the Web browser
      - Path for the HTML editor

      You can find additional information about making settings under Making Settings [Seite 23].

   – Choose *Save* once you have made all the required settings for your Web template.

7. You can now publish your Web template.

   Here you can see the URL for your completed Web template. You can now publish the Web template directly in the Web, or you can integrate it as an iView in your Enterprise Portal.

   You have the following options for using the Web template again:

   – Choose to display the Web template in the Web browser.

   – Choose to save the Web template as an iView in a role.

   – Choose to save the Web template as an iView file locally, so it can be used in the iView studio.

   Then choose *Exit* to close the BEx Web application wizard. The Web template appears in the BEx Web Application Designer. You can now continue to edit the template as required.

Making Settings

Use

In the Web Application Designer or the Web application wizard, you can make and save general settings. You can select a default stylesheet used to display your Web application and determine the path for the Web browser and the HTML editor. You reach the dialog for making general settings in the Web Application Designer through *Tools* → *Settings...*. In the Web application wizard you make general settings in the *Save Web Template* window using the *Settings* pushbutton. If you want to save your general settings, mark the relevant checkbox in the *Settings* dialog box.

You can determine a different stylesheet for each Web template separately from the general settings. See Determining Web Template Properties [Seite 28]. If you do not make separate settings, the system uses the general settings.

Procedure

Selecting a Stylesheet

1. From the Web Application Designer menu bar choose *Tools* → *Settings...,* or in the Web application wizard in the *Save Web Template* window, choose the pushbutton *Settings.*
2. On the *General* tab page, choose the pushbutton with the three dots (*Change Settings).*
3. Select a stylesheet from the list You see an HTML document in the preview window on the right which applies to the selected stylesheet.

   Only those stylesheets stored on the BW server are displayed in the selection list. If you want to use a stylesheet that is not in the list, for example one that is stored on your Web server, select the checkbox beneath the selection list and enter the URL.

3. Choose *OK*.

Determining the Path for the Web Browser and the HTML Editor

1. From the Web Application Designer menu bar choose *Tools* → *Settings...,* or in the Web application wizard in the *Save Web Template* window, choose the pushbutton *Settings.*
2. On the *Directories* tab page, use the pushbutton with the three dots next to the *Change Settings* entry field, to specify the required path.
   - Path for the Web browser

     You reach the *Open* dialog box, in which you specify the path.

   - Path for the HTML editor

     You reach the *Open* dialog box, in which you specify the path.

3. Choose *OK*.

Storage of Stylesheets and Icons

Use

You want to use stylesheets in your Web templates that exchange icons or supplement the Web template with other MIME objects such as images, icons or logos.

Prerequisites

You have adjusted the stylesheet [Seite 218] or icons to your settings.

Procedure

You find stylesheets and other MIME objects in the MIME Repository on the Web Application Server. To reach the MIME Repository, in transaction SE80 (ABAP Development Workbench) *choose MIME Repository*.

Storage of Own Stylesheets

You can find the stylesheets delivered with BW under *SAP→ Public→ BW → BEx → Stylesheets and SAP → Public → BW → BCT → Stylesheets.* You can also select these stylesheets in the Web Application Designer [Seite 14]. To change your stylesheets proceed as follows:

1. Copy a stylesheet as a template to your computer. To do this, select the stylesheet, and with the right mouse button choose *Export → As a Copy.*
2. Edit the stylesheet in an editor.
3. Store the changed stylesheet under *SAP → Public → BW → Customer → Stylesheets* by selecting the *Stylesheets* folder and, using the right mouse button, choosing *Import → MIME Object.* Choose a name for the stylesheet.

For each theme (that is, color specifications) In the MIME Repository, there is a stylesheet without a suffix and 4 stylesheets with the suffix _ie4 (for Internet Explorer 4), _ie5 (for Internet Explorer 5), _n47 (for Netscape Navigator 4.7) and _n60 (for Netscape Navigator 6.0). The stylesheets are optimized for each browser and are linked to the relevant browser when you start a Web application. That is, for example, if there is a stylesheet with the ending _n47, this is used when you start a Web application in Netscape Navigator 4.7. If there is no stylesheet available with the corresponding suffix, the stylesheet without the suffice is embedded.

This is only relevant for changed stylesheets if you are using several types of browser. You can optimize the stylesheet for each browser. If you are only using one type of browser, optimize the stylesheet without the suffix for this browser. To do this, use the stylesheet with the browser-specific suffix as a template.

Storing Changed Icons

If you want to change icons that are used by default in the Web application, proceed as follows:

1. Delete the relevant icon in *SAP → Public → BW → BEx → Icons* by selecting the icon and choosing *Delete* from the context menu.
2. Save your new icon under the same name as the original icon by selecting the *Icons* folder and with the right mouse button, choosing *Import → MIME Object.*

Storing Your Own MIME Objects (for example, images and icons)

To include your own images and icons in your Web application, your have to store them in the MIME Repository. Proceed as follows:

- In general, you can store your MIME objects anywhere under *SAP → Public → BW.*
  - You insert MIME objects by selecting a folder and choosing with the right mouse button *Import → MIME Object.*
  - You create new folders by selecting a folder and choosing with the right mouse button *Create → Folder.*
- So that your images are displayed in the Web Application Designer, we recommend that you store them under *SAP → Public → BW → Customer → Images.* You can include images that you save in this folder in the Web Application Designer without having to manually edit the HTML.

Including Icons in the Web Template

- If you have stored your images under *SAP → Public → BW → Customer → Images,* you do not have to do anything else after you have included them in your template.
- If your image is in another folder under *SAP → Public → BW* you have to maintain the path manually in the HTML.

  If the image Picture1.gif is in *SAP → Public → BW → Customer → MyPictures* you have to access the image under Mime/Customer/MyPictues/Picture1.gif.
- If you want to use the image as a background screen, you have to access it through the stylesheet by specifying the background image in a stylesheet class. You enter the relative path for storing the stylesheet.

  You want to give a specific area a background. You have stored the picture for this under *SAP → Public → BW → Customer → MyPictures.* You stylesheet is saved under *SAP → Public → BW → Customer → Stylesheets.* You add the specification background-image_url (..\MyPictures\Picture.gif) to the affected class in the stylesheet.

From Web Template to Web Application

The purpose of the design process is to create an HTML page with BW-specific content, called the Web application.

The Web page executed in the browser is described as a Web application.

Creating a Web Template

The starting point is the Web template. The Web template [Seite 225] is an HTML document that is used to define the structure of a Web application and that contains placeholders for Web items, Data Providers and BW URLs [Seite 231].

A Web template is referred to as a *Web application* only when the data is actually displayed in the Web browser.

A look at the HTML view shows that the basis of the template is an HTML page and an object tag has been created for the template.

In the course of the design process, you change this Web template by embedding placeholders for Web items and Data Providers. You can make these changes in the HTML view.

Integrating Web Items and Changing the Settings and Layout

The Web items [Seite 36] on the standard tabs are used as templates. By dragging it into your Web template, it becomes a concrete version of a Web item, called an object. The Web item has a name and certain standard properties that you can change as required.

You see the changes in the HTML view. An object tag was integrated as placeholder in the HTML for the Web item and the data provider. Change the name and select a data provider. In the HTML view, you can see that your settings have been written to the object tag.

Your layout is also copied to the HTML in the usual manner for HTML editors.

Describing Data Binding and Selecting a Query/View

The data provider [Seite 268] provides the data for your Web item. You can assign a data provider to multiple Web items.

The data provider is a dynamic object that delivers current data for one or more Web items at runtime. You define the start view of the data provider by selecting a query or stored query view.

The data provider concept makes it possible to exchange the data source for a Web item easily. By means of navigation, that is changing the drilldown, the Web item always displays the current drilldown data. If a particular data provider is assigned to more than one Web item, the changes affect all the Web items involved.

Storing and Publishing the Web Template

Execute the Web template in the browser. When it is executed, the Web template becomes a Web application, that is, the template is saved on the Web Application Server and a URL is generated for this Web application.

The object tags are replaced with the information as defined by the Web item and data provider settings at runtime (triggered by the URL call). The Web template on the Web Application Server is accessed. This means that you must save your Web template before you execute it.

Overwriting Web Templates

If you have authorization for deleting Web templates, you can also overwrite existing Web templates that are saved in your favorites or roles.

To do this, create a new Web template. To overwrite the existing Web template with the new Web template, from the Web Application Designer menu bar, choose *Web Template* → *Save As* In the *Save Web Template* dialog box, select the Web template that you want to overwrite from your favorites or roles. Choose *Save.* In the *Do you want to overwrite <Name of selected Web Template>?* dialog box, choose *OK.*

You cannot overwrite Web templates that are open in the Web Application Designer.

Determining Web Template Properties

Use

You can specify the properties for your Web application in each Web template.

Procedure

Select the Web template from the dropdown box in the header of the *Properties* window.

Tabstrip: General

- Under *Description,* you can give the template a description of your choice.
- Under *Stylesheet*, the stylesheet that is to display the Web application is shown. Choose the button with the three dots (*Select Stylesheet*) to select another for your Web application.
  - The list of stylesheets is given on the left-hand side of the *Select Stylesheet* dialog box. Select a stylesheet to see it in the preview window on the right-hand side.
  - To select a stylesheet for your Web application, select the required stylesheet and choose *OK.*

    Only those stylesheets stored on the BW server are displayed in the selection list. If you want to use a stylesheet that is not in the list, for example one that is stored on your Web server, select the checkbox beneath the selection list and enter the URL. Choose *OK*.

Tabstrip: Web Items

- Under *General*, you can give the Web application the following properties:
  - *Status-Free Navigation*

    By selecting *Status-Free Navigation,* the status on the server is removed after every navigation step in the Web application. This is only recommended for Web applications in which you rarely navigate.
  - *Use Personalized Template, if Available*
  - *Do Not Display System Messages*
  - *Do Not Display Warning Messages*
  - *Always Display Variable Screen*

    If *Always Display Variable Screen* is not selected, the variable screen is only displayed when the mandatory variables are not filled. By selecting the *Always Display Variable Screen*, the variable screen is displayed at all times.
  - *Reset Variable Values to Default Values*
  - *Display Same Variables Only Once*

    This ensures that the same variables for different queries are displayed only once.
  - *Open Dialogs in New Windows*
  - *Read Mode for Data*
  - *Output Optimization (Device-Dependent)*

By selecting *Output Optimization (Device-Dependent)*, you arrive at an automatic, device-specific optimization of item settings for the runtime (for example, chart size for PDAs).

- In the *Entries in the Context Menu* column, all possible context menu entries are listed. You can decide whether each context menu entry is
  - Not displayed (*No Display)*
  - Always displayed in the basic context menu (*Always Display)*
  - Or displayed in the enhanced menu (*Enhanced Menu*)

  .

  See also Modifying the Context Menu [Seite 251]. The letters *X* (for *Always Display*) and *E* (for *Enhanced Menu*) describe the values for the corresponding parameters for modifying the context menu.

Storing Settings in the Library

- As well as saving the settings you determine for Web items, you can also save the properties of a template in a library. Choose *Save in Library* in the lower area of the *Web Item* tabstrip. For details of how to save your properties and for creating new libraries, see Working with the Library for Web Items [Seite 33].
- The saved Web template properties are treated in the same way as the Web items you saved in the library, meaning that you can find your saved Web template properties in the *Web Items* window on the *Library* tabstrip. Once you have saved your Web template properties, you have created a model for further Web templates.

Applying Settings to the Current Web Template

- To copy properties to other Web templates, proceed as follows:
  a. In the *Web Items* window, on the *Library* tabstrip, with the right mouse button choose the Web template property that you want to copy.
  b. Choose *Transfer Properties for Current Template.*

     The properties for the Web template are transferred. You can see this in the changed settings for the Web template in the *Properties* window.
- To reassign the standard settings to the current Web template, choose *Web Template* → *Reset Properties*

  In the *Properties* window, the standard settings are now reset.

Designing the Layout of Web Templates

Use

You can change the layout of your Web template - the HTML page with BW-specific contents - as you are familiar from HTML editors.

Arranging Web Items on the Page

- You can change the size of the placeholders. You can see what effect resizing a Web item in a Web application has by looking at the values, which are shown in the HTML view by the parameters *Height* and *Width* for the corresponding item.
- You can align the Web items horizontally.
  - Choose to left-justify the Web item.
  - Choose to center the Web item.
  - Choose to right-justify the Web item.
- To regroup the Web items, drag a Web item to the required position with Drag&Drop.
- To place several Web items one next to the other you have to set the width of the Web template to its optimal value.

  You have arranged a Web item on your Web template and want to arrange a second one next to it. If the Web template is wide enough for the second Web item, it is placed to the right of the first one. If it is not wide enough, the second Web item is placed below the first one since the browser makes a line feed as for standard HTML.

  To align the individual Web items in your Web template in the best possible way, use an HTML table.

Arranging Web Items using an HTML Table

To arrange Web items next to and below one another you can use an HTML table. You can apply this grid as you need to.

1. Choose or *Insert* → *Table* → *Insert Table*.

- In the *Insert Table* dialog box enter the *Number of Rows* and *Number of Columns*.
- In the *Table Tag Attribute* and *Cell Tag Attribute* fields you can make settings that are written to the corresponding tags in HTML. The table is displayed in the layout view as defined by these tags.
- You can give the table a title under *Title*.
- You can show and hide the frame during the layout process by choosing *Layout* → *Display Frame*.
- To show the HTML tags in the layout view choose *Layout* → *Display HTML Tags*.
- You can change the table with *Insert* → *Table* →
  - *Insert Rows*

- *Insert Columns*
- *Insert Cells*
- *Delete Rows*
- *Delete Columns*
- *Delete Cells*
- *Merge Cells*
- *Split Cells*

  You can change the size of the complete table but not of individual cells.

2. Drag different Web items to the individual table cells, depending on whether you want to arrange your Web item horizontally or vertically.

Enhancing Web Templates with Texts

As well as inserting and arranging Web items, you can also enhance the Web template with texts and format them.

1. Place the cursor on a position in the Web template and enter a text of your choice.
2. You can format it by selecting the text passage and selecting one of the following options:
   - Change Font
   - Change Font Size
   - Bold Character (**B**)
   - Italic Character (*I*)
   - Underlined Character(**U**)
   - Character Settings ( )
   - Numbering ( )
   - Bullets ( )
   - Reduce Indentation ( )
   - Enlarge Indentation ( )
   - Left-justified ( )
   - Centered ( )
   - Right-justified ( )

Enhancing Web Templates with Images

As well as inserting and arranging Web items and texts, you can attach image, such as company logos for example, to your Web templates. These images are store in the MIME Repository on the BW server. The system supports the formats GIF, JPG and BMP.

1. Position the cursor where you want to insert an image in the Web template.
2. Choose *Insert* → *Image* and select the image file that you want to insert. Choose *OK*.

   If you want to use an image that is not in the list, for example, one that is stored on your Web server, mark the checkbox beneath the selection list and enter the URL of the image. For more information about inserting images in Web templates, see Stylesheet and Icon Store [Seite 24].

Working with the Library for Web Items

Use

If you integrate a Web item in your Web template from the templates under *Standard* and you have defined your settings, you might want to use this Web item again in this form in other Web templates without having to define all the settings over again. The BEx Web Application Designer enables you to use your own version of a Web item as the Web template for other items. You store this Web item as a template and insert it in a library that you can organize yourself. You can then access your Web items in the *Web Item* window using the *Library* tabstrip.

Prerequisites

You have integrated a Web item in your Web template and defined your settings on the *Web Item* tabstrip in the *Properties* window.

Storing Web Items in the Library

You save the properties that you created on the *Web Item* tab page in the library. These Web items have template characters and can be altered. Data binding is not stored in relation to this Web item.

1. Choose *Save in Library* in the lower part of the *Web Item* tabstrip to store your Web item as a template.
2. Select a library in the *Add Web Item to Library* dialog box.

- To create a new library choose .
  a. In the *Create New Library* dialog box, define whether you want to store your library in your favorites or in a role.
  b. Select the folder in which you want to store your library.
  c. Define a meaningful *Description* that will appear later on in your library.
  d. In the *Technical Name* field, enter a unique name.
  e. Choose *Save.*
- To select an existing library choose .
  a. In the *BEx Open* dialog box, select the place where you stored the library – *History, Roles, Workbooks*.
  b. Select a library and choose *OK*.

3. Define a meaningful *Description* that will appear later in your library as text for your personal master Web item.
4. In the *Technical Name* field, enter a unique name.
5. Choose *Save.*

Your Web item is now saved in the library.

Using Web Items from the Library

You can find the libraries you created containing your personal Web items on the *Library* tabstrip in the *Web Items* window. Your libraries and the Web items assigned to the libraries are displayed here in a tree-like structure.

- To place your Web items in Web templates, drag them using Drag&Drop to your Web template in the same way as you do with standard items.
- To change the settings for your saved Web item, select the relevant Web item and with the right mouse button choose *Change Web Item*. The settings for changing the item are offered in the *Change Web Item* dialog box.
- To delete a Web item from the library, select the Web item and with the right mouse button choose *Delete Web item*.

Managing Libraries

If you do not yet have any libraries, proceed as follows: Click on *Context Menu* and choose one of the options.

- *Open Library* to add a library.
- *Create New Library* to create a new library (on the database).

To manage your existing libraries, select the appropriate library with the right mouse button and choose one of the following options:

- *Open Library* to add a library to your collection of libraries in the *Web Item* window.
- *Close Library* to remove a library from your collection of libraries in the *Web Item* window.
- *Create New Library* to create a new library (on the database).
- *Delete Library* to delete a library (from the database).
- *Change Description* to change the description of the library.
- *Documents* to create documents for your library, or to create or edit existing documents. You can find additional information under Documents [Extern] and Creating Documents [Extern] .
- *Publish Library in Role* to add your library to a role.

Overwriting Libraries

You can overwrite libraries that you have created and saved.

1. In the *Web Items* window of the Web Application Designer, choose the *Library* tab page.
2. Using the context menu, choose *Create New Library.* You reach the *Create New Library* dialog box.
3. In you favorites or roles, select the library that you want to overwrite and choose *Save.*

   You can overwrite those item libraries that contain Web items that are not currently in use in Web templates or that you are not open in your Web Application Designer.
4. The *Overwrite Object* dialog box appears.
5. Choose *Yes.*

Setting Up the BEx Web Application Designer

Use

The Web Application Designer has a set appearance the first time you start it. See BEx Web Application Designer [Seite 14]. As an MDI application, however, you can adjust your working environment to your requirements. The object on which you are working, namely the Web template, is handled differently from the tools and help windows with which you are working.

Showing and Hiding Screen Areas

You can hide the *Web Items* and *Properties* windows by clicking on the x in the title bar.

To show the window again choose *View* → *Web Items* or *View* → *Settings.*

You close the template by closing *Template* window.

To show and hide the tool bar or status bar, choose *View* → *Toolbar* or *View* → *Status bar.*

Moving Screen Areas

You can move the toolbar and the *Web Items* and *Settings* windows anywhere. Depending on where you move the object to, it is anchored or it appears freely as a toolbox.

Template Window

An individual template window can be:

- Open
- Closed

  You can close a template window but not hide it.
- Minimized
- Maximized

You can open and manage different windows in parallel with Web templates. You can also arrange the windows differently.

- To arrange the different windows to overlap choose *Window* → *Cascading.*
- To arrange the different windows next to each other choose *Window* → *Horizontal.*
- To arrange the different windows below each other choose *Window* → *Vertical.*

Web Items

Definition

Web items are objects that obtain data from data providers [Seite 268] and make the data available as HTML. Web items have attributes such as *header*, *width*, *height*, and *create navigation links*. You use parameters or specific commands to change these attributes.

If the data, the navigational status, or the attributes change, the HTML for the Web item is regenerated. A Web item must always be assigned to a data provider.

Structure

The following Web items are used in Web applications:

- Table [Seite 43]
- Chart [Seite 47]
- Dropdown Box [Seite 143]
- Radio Button Group [Seite 146]
- Checkbox [Seite 149]
- Generic Navigation Block [Seite 151]
- Hierarchical Context Menu [Seite 154]
- Filter [Seite 156]
- Label [Seite 159]
- Text Element [Seite 161]
- List of Exceptions [Seite 164]
- List of Conditions [Seite 165]
- Alert Monitor [Seite 166]
- Role Menu [Seite 169]
- Ticker [Seite 172]
- Map [Seite 173]
- Single Document [Seite 205]
- List of Documents [Seite 207]
- Ad-hoc Query Designer [Seite 210]
- ABC Classification [Seite 217]
- What If Prediction [Seite 215]

Integration

In the BEx Web Application Designer or the BEx Web Application wizard, on the *Standard* tab, you can use the Web items listed above as Master Web Items [Extern] You choose a master Web item from the

list, assign a data provider to the Web item and edit the attributes. You have now created your own Web item that your can add to your Web template or save in the library to be used again.

General attributes

Use

General attributes are attributes that are valid for all Web items in Web applications.

Features

The following general attributes are available:

Attributes	Description
Logical name of a Web item (ITEM or **NAME)**	As well as the Web item key (ITEMID) that is assigned when the Web item is created in the Web Application Designer, you also have to assign a logical name when using the Web item in Web application. This enables you to use the same Web item several times in a Web application. If commands are sent to this Web item, you always have to specify the name of the Web item as the parameter ITEM. You cannot change this attribute with a command URL.
Web item key (ITEM_ID) (option 1)	You create a Web item for a Web application based on a Web item setting that you have made in the Web Application Designer. You cannot change this attribute with a command URL.
Class name for the Web item class (ITEM_CLASS) (option 2)	Name of the ABAP object class that generates the output. This corresponds to the use of non-reusable Web items (standard Web items) in the Web Application Designer. Web items are created with the default values for the attribute. The class name for the table is, for example, CL_RSR_WWW_ITEM_GRID
Logical name of the Data Provider for the Web item (DATA_PROVIDER)	You have to assign every Web item to (exactly) one data source. The Web item gets the data and metadata from this Data source that is needed to generate the output as well as commands.
Height (HEIGHT)	You can only specify the height in pixels. This attribute is not used in tables.

The parameters ITEMID and WBID (ITEM_WBID) used in BW 2.x are still supported. We recommend, however, that you no longer use these.

In the BEx Web Application Designer, in the *Properties* area, you can set the following attributes in the *Web Item* tabpage, under *General*:

Attributes	**Description**
Caption (CAPTION)	You can enter a caption. If you do not enter a caption, then an appropriate value is suggested.
Generate caption (GENERATE_CAPTION) 'X' = Yes, ' ' = No	By activating this attribute, an additional row containing the Web item is generated in the table. The text you have entered under *Caption* is displayed in this table. The SAPBEXTableCaption style is used for the caption.
Width in pixels (WIDTH)	You can only specify the width in pixels. You can use the suggested width or determine a new width using *Change Attribute...* Note that the Web browser automatically increases the widths of the table if the one you have chosen is too small.

Border type **(BORDER_STYLE)** 'BORDER' = With border ‚NO_BORDER' = Without border ‚FORM' = Form	Here, you can choose the following display types for the Web item: • With border Set as default value for *table, generic navigation block, Alert Monitor, filter, text elements, menu, list of conditions,* and *list of exceptions.* The border is only displayed if GENERATE_CAPTION=X. • Without border Set as default value for *maps, charts,* and *individual documents.* • For form The content of the Web item is normally displayed with a blue background. Set as default value for *document list, hierarchical context menu, label, dropdown box, radio button group,* and *checkboxes.* The standard value settings represent the recommended display type for the Web item.
Closed (CLOSED) 'X' = Yes, ' ' = No	You can close the Web item (CLOSED=X): The Web item is not displayed. Only the caption remains (if there is one) and the open/close symbol for this Web item. By clicking on the open/close symbol, you can make the Web item visible or invisible. To be able to see the caption, you have to activate the attributes *Generate Caption* and *Objects with Navigation Links.*
Hide object (HIDDEN) 'X' = Yes, ' ' = No	You can hide the Web item (HIDDEN=X): Although the Web item is embedded in the Web template, it is not visible. The Web item and the caption with the open/close symbol are not shown.

Objects with navigation links (GENERATE_LINKS) ‘X’ = Yes, ‘ ’ = No	This attribute creates the open/close symbol, with which you can open or close the Web item. Behind this symbol is a link that calls up the Web application with the corresponding parameters. If you do not want the user of the Web application to be able to navigate within it or if you want the user to be able to print the display, then deactivate this function.
Web item controls different data providers (TARGET_DATA_PROVIDER_I) (optional) For many Web items, this attribute appears under the respective special attributes. These Web items obtain their data from a view.	If a Web item is to control several data providers, for example, a navigation block, it can be expressed by this parameter. If it is not specified, the Web item always controls its own data provider. The values specified under this parameter are the logical names of the data providers, for example, references using wild cards. You do not have to specify the data provider belonging to the Web item. If it is missing, the Web item does not control its own data provider. The Web item output generation is always based on the item’s own data provider and does not include the others. The commands are forwarded to the target data provider.

Resetting and Reinitializing Web Items

Use

You use this command to reinitialize an existing Web item. The Web item is recreated according to the parameters and takes the data provider [Seite 268] and the logical name of its predecessor. This allows you, for example, to create a graphic easily from a table without having to create both objects in the Web template.

You can use this command for creating almost every kind of Web item. However, the *Map* Web item is an exception. It cannot be created consistently using this command.

Functions

CMD	RESET_ITEM
Parameter	**Description**
All parameters from the previous item	**Technical name of the InfoCube**

Converting the item “Item1” to a table without alternate rows:

<SAP_BW_URL ITEM='Item1' CMD='RESET_ITEM' ITEM_CLASS='CL_RSR_WWW_ITEM_GRID' ALT_STYLES=''>

Converting the item “Item1” to a pre-defined chart item:

<SAP_BW_URL ITEM='Item1' CMD='RESET_ITEM' ITEM_ID='myChart'>

When combined with a select box (an HTML form), you can display several charts in one place by leafing through the select box.

Tables

Definition

A Web item that obtains data from a query view to create a table for a Web application. There are navigation links that go along with the table.

Use

The Web item *Table* displays the value of a query view in the Web application in the form of a table. The same list geometry that is used in the BEx Analyzer is supported. Characteristics and structures can be displayed in both the rows and the columns.

Structure

As well as its general attributes [Seite 38], the Web item *Table* has the following attributes:

Attributes	Description
Alternating styles for table rows (ALT_STYLES) 'X' = Yes, ' ' = No	In the rows, the formats *SAPBEXstdData* and *SAPBEXstdDataOdd* are used alternately to display numerical values. These formats are adjusted in the CSS file that is assigned to the template. Totals cells are removed from this display.
Only hierarchy navigation **(ONLY_HIERARCHY_NAVIGATION)** 'X' = Yes, ' ' = No	**Only allow hierarchy navigation** The context menu is hidden in this mode, and you can only expand and collapse from the list.
Suppress repeated texts **(SUPPRESS_REPETITION_TEXTS)** 'X' = Yes, ' ' = No	**Suppressing repeated texts** If you set this attribute toe ' ', the cells in the table are not merged and the texts and keys are repeated. If you do not specify a value for this attribute, the texts are suppressed.
Number of data rows displayed at one time (BLOCK_SIZE)	Specifying this parameter allows you to determined the number of data rows that are displayed after which an area for scrolling is inserted. If the value is set to 0, the complete table is displayed, regardless of the number of data rows. The parameter is set to 100 by default.

Number of data columns displayed at one time (BLOCK_SIZE_COLUMNS)	Specifying this parameter allows you to determined the number of data columns that are displayed after which an area for scrolling is inserted. If the value is set to 0, the complete table is displayed, regardless of the number of data columns. The parameter is set to 0 by default.
Table: Scrolling area top **(SHOW_PAGING_AREA_TOP)** 'X' = Yes, ' ' = No	**Display the scrolling area at the start of the table** The parameter is set to ' ' by default.
Table: Scrolling area bottom **(SHOW_PAGING_AREA_BOTTOM)** 'X' = Yes, ' ' = No	**Display the scrolling area at the end of the table** The parameter is set to 'X' by default.
Display column headers (SHOW_COLUMN_HEADER) 'X' = Yes, ' ' = No	**Display the labels above the data** The parameter is set to 'X' by default.
Display column headers SHOW_ROW_HEADER) 'X' = Yes, ' ' = No	**Display the labels to the left of the data** The parameter is set to 'X' by default.
Display data cells (SHOW_DATA_CELLS) 'X' = Yes, ' ' = No	The data cells are shown by default. That is, the parameter is set to 'X' by default.
Affected DataProvider **(TARGET_DATA_PROVIDER)**	List of data providers to which all table commands are sent.
Display data from value row (DATA_ROW_FROM)	**Data row after which data is displayed** The parameter is set to 1 by default.
Display data to value row (0=to the end) **(DATA_ROW_TO)**	**Data row to which data is displayed** The parameter is set to 0 by default. If the value is 0, the system tries to display all of the rows. If there are too many, a scrolling area is inserted. If the value is not 0, data is displayed up to the specified row and there is no scrolling area.
Display data from value column (DATA_COLUMN_FROM)	**Data column after which the data is displayed** The parameter is set to 1 by default.

Display data to value column (0=to the end) **(DATA_COLUMN_TO)**	**Data column to which data is displayed** The parameter is set to 0 by default. If the value is 0, the system tries to display all of the columns. If there are too many, a scrolling area is inserted. If the value is not 0, data is displayed up to the specified column and there is no scrolling area.

Attributes that cannot be set in the Web Application Designer:

MODIFY_CLASS	**ABAP class that changes the table contents** By using the Web design API for tables, you can adjust the contents of the table cells individually. See also: Web Design API for Tables [Seite 338]

Display the table with a maximum of 5 visible data columns and 10 visible data rows. Start at row 30 and show a scrolling area above and below the values

<object>

<param name='OWNER' value='SAP_BW'>

```
<param name=’CMD’ value=’GET_ITEM’>
<param name='ITEM' value='Table'>
<param name='ITEM_CLASS' value='CL_RSR_WWW_ITEM_GRID'>
<param name='DATA_PROVIDER' value='View1 >
<param name='DATA_ROW_FROM' value='30'>
<param name='SHOW_PAGING_AREA_TOP' value='X'>
<param name='SHOW_PAGING_AREA_BOTTOM' value='X'>
<param name='BLOCK_SIZE' value='10'>
<param name='BLOCK_SIZE_COLUMNS' value='5'>

ITEM :Table

</object>
```

Display only the 3 data rows without headers

```
<object>

<param name=’OWNER’ value=’SAP_BW’>
<param name=’CMD’ value=’GET_ITEM’>
<param name='ITEM' value='Table'>
<param name='ITEM_ID' value='MYTABLE'>
<param name='DATA_PROVIDER' value='View1 >
<param name='DATA_ROW_FROM' value='3'>
<param name='DATA_ROW_TO' value='3'>
<param name='SHOW_COLUMN_HEADER' value=' '>

ITEM :Table

</object>
```

Charts

Definition

A Web item that obtains data from a query view to create a graphic for a Web application.

Use

Using the *Chart* Web item, you can display data graphically in your Web application.

Structure

As well as its General Attributes [Seite 38], the *Chart* Web item has the following attributes:

Attributes	Description
Edit Graphic	**See Editing Charts [Seite 49].**
Suppress Totals **(SUPPRESS_SUMS)** 'X' = Yes, ' ' = No	The totals rows/columns of the source data provider are not displayed in the chart. This means that you do not have to change the data provider to suppress totals which may affect charts adversely.
Swap Display Axes **(SWITCHMATRIX)** 'X' = Yes, ' ' = No	With this attribute you can swap the chart axes in the display, without changing the navigational state of the query view itself. You get the same effect if you swap the two free characteristics with one another in the initial query view.
Hide Expanded Hierarchy Nodes **(SUPPRESS_OPENHIERARCHIENODES)** 'X' = Yes, ' ' = No	You can remove open nodes when you create graphics in active presentation hierarchies. This ensures that the total of the values displayed is the overall result.
Affected Data Providers **(TARGET_DATA_PROVIDER)**	List of data providers to which all commands of the chart are sent.
Automatic display of units and currencies **(AUTOMATIC_LABELS)** 'X' = Yes, ' ' = No	If the units and currencies in the query are the same as other settings, and you select the attribute, just these units, currencies, and settings are displayed **automatically** on the chart. However, you can set the display of units and currencies yourself. See Editing Charts [Seite 49] and Adding and Removing Axis Titles and Units [Seite 125].
Diagram title (language-dependent) **(TITLE)**	Entry of language-dependent text for diagram title. See Language-Dependent Texts [Seite 265].

Section Axis (X): Title (Language-Dependent) **(TITLE_CATAGORIES)**	Language-dependent text for section axis (X). See Language-Dependent Texts [Seite 265].
Size Axis (Y): Title (Language-Dependent) **(TITLE_VALUES)**	Language-dependent text for size axis (Y). See Language-Dependent Texts [Seite 265].
Secondary Section Axis (X): Title (Language-Dependent) **(TITLE_SEC_CATOGORIES)**	Language-dependent text for secondary section axis (X). See Language-Dependent Texts [Seite 265].
Secondary Size Axis (Y): Title (Language-Dependent) **(TITLE_SEC_VALUES)**	Language-dependent text for secondary size axis (Y). See Language-Dependent Texts [Seite 265].

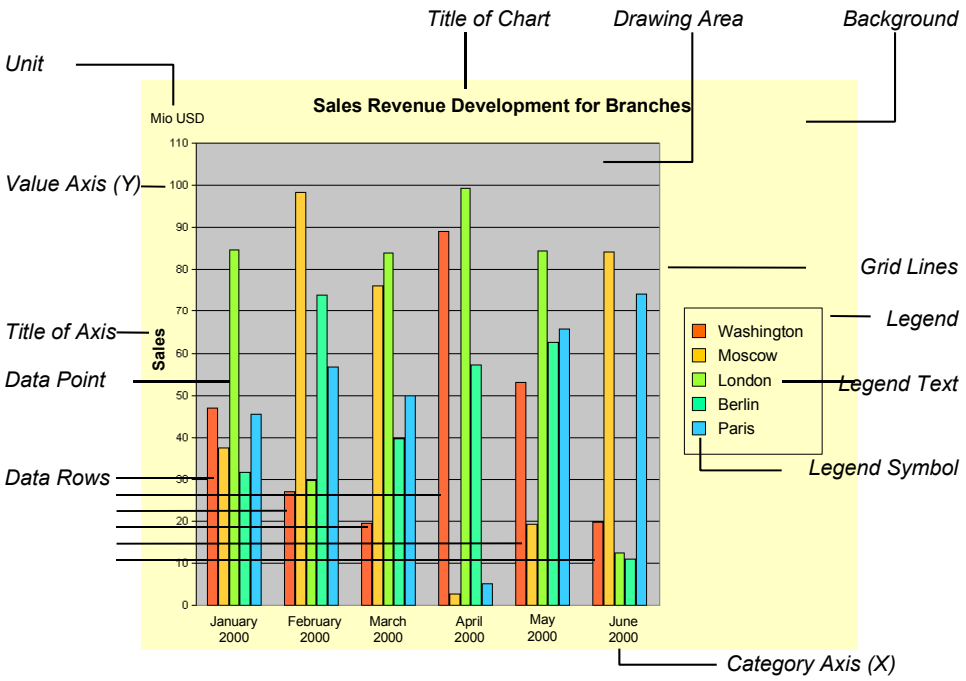
Note the following for the *Heading* attribute under *General* (generic attribute):

Title	You can enter a header for the chart. **This header is not a part of the chart.** Under *Edit graphic* there is also the option of specifying a header, though this is then a part of the chart. The header is only displayed if the attribute *Generate header* is activated at the same time.

Editing Charts

Use

Charts display rows of numbers visually and make it easier for users to interpret business data.



Prerequisites

You can edit a chart in the Web Application Designer or in the Web Application Wizard.

Editing in the Web Application Designer

You created a new Web item of the type *Chart* or selected an existing Web item of the type *Chart*. In the *Properties* window on the *Web Items* tabstrip in the *Special* category, you called up *Edit Graphic* using the pushbutton with the three dots (see also Creating Web Applications with the BEx Web Application Designer [Seite 17]).

Editing in the Web Application Wizard

You created a new Web item of the type *Chart* and then in the step *Editing Attributes* in the *Special* category, you called up *Edit Graphic* using the pushbutton with the three dots.

Process

1. Before you begin publishing a chart you should define which chart type [Seite 61] you want to display. You can find out how the data provider should be built based on the class of the chart type.
2. Select an existing query or formulate a new query with which the suitable view on the data can be created. This is the suitable data provider.
3. Start the publishing process and create a new Web item of type *Chart*.
4. It is normally advisable to configure the properties of the Chart [Seite 47] Web item as follows:

- Expanded hierarchy nodes should be hidden.
- Totals should be suppressed.
- If you want to swap the columns and rows of the data provider in the chart, you should assign the chart the property *Axes for display*. The columns and rows are then swapped automatically when the chart is generated. You need not change the view on which the chart is based.

5. When you edit the chart, the Web Application Designer or Web Application Wizard first shows the default setting, that is, a bar chart.
   - First configure the preview window so that the number of data series and data points displayed corresponds to your data provider (see Configuring the Preview Window [Seite 51]).
   - Assign the chart the required chart type and format the chart as you like.
   - You can select all the functions of a chart in the context menu with the right mouse key. Different functions are available in the context menu depending on the element you marked in the chart.
6. Check your formatting by publishing the chart immediately after making a change. In this way you can see if your chart is correctly formatted in the Web version.

Configuring Preview Windows

Use

When you edit a chart you can see the current format of the chart in a preview window. The preview window shows five data series with six data points each, irrespective of how the data provider is set up.

You can adjust the size of the preview window. To do this, drag the right-hand corner of the bottom line down and to the right. At the same time, the system calculates the size and width of the graphic in pixels. The minimum size is 10x10 pixels.

Change the preview window settings so that the number of data series and data points corresponds to the data provider. For chart types of class 1, the uppermost data series in the legend corresponds to the first table row, the next data series corresponds to the second table row, and so on.

> The preview does not correspond to the actual results after publishing. The data series and data points are only sample data used to show you what the effects of formatting are. You see the actual data only after it has been published.

Procedure

1. In the window in which you are editing the chart, enter the number of data series contained in the data provider in the *Number of data series* field.
2. In the *Number of Data Points* field, enter the number of data points in a data series.
3. Choose *Apply*.

The chart in the preview window is changed according to your entries.

See also: Data Series and Data Points [Seite 96]

Undoing Changes

Use

When you edit a chart, all the changes you make to the chart are recorded. If you are not satisfied with the results of the changes, you can undo the changes step by step.

You can reset the chart to the standard setting (bar diagram). All the changes you made to the chart are lost.

Procedure

Undoing Changes

1. Click with the right mouse key on any area of the chart.
2. To undo the last command, choose *Undo* in the context menu.

   The name of the menu options shows you which command is being undone. For example, if you last changed the chart type, the menu option is *Undo Chart Type*. If there is no command that can be undone, the menu option is *Undo Not available*.

Resetting the Chart to the Standard Setting

In this step all the changes you made to the chart are lost.

Select the *Reset* function in the window in which you are editing the chart.

Formatting the Chart Background

Use

You can change the background of the entire chart. You can choose another filling and change the border as you like.

Procedure

1. Click with the right mouse key on the outermost area of the chart.
2. In the context menu choose *Format Chart*.

   The *Format Chart Area* dialog box appears.
3. Select the formatting for the filling and border. See Changing the Filling and Borders of Surfaces [Seite 55].
4. Choose *OK*.

See also:

Formatting Chart Plot Areas [Seite 54]

Formatting Chart Plot Areas

Use

You can format the plot area of the chart as you like. You can change the filling and borders of the surface between the X and Y axes. You can also format the border surrounding the entire plot area, including the axes and labels.

Procedure

1. Click with the right mouse key on the plot area, for example on a free area within the X and Y axes.
2. In the context menu choose *Format Plot Area*.
3. The *Format Plot* dialog box appears.
4. Make the changes described below and choose OK.

Changing the Filling and Borders of the Area between the X and Y Axes

In a pie or ring diagram, this area is a rectangle enclosing the circle.

1. Choose tabstrip *Pattern*.
2. Select the formatting for the filling and border. See. Changing the Filling and Borders of Surfaces [Seite 55].

Changing the Border of the Entire Plot Area

1. Choose tabstrip *Line*.
2. If you want to copy the default formatting, choose *Automatic*.
3. If you want to set up your own formatting, choose *Custom.* Select the required type and color for the lines.

See also:

- Changing Quadrants [Seite 118]
- Formatting the Chart Background [Seite 53]

Changing the Filling and Border of Surfaces

Use

You can change the filling and border of the surface of elements having the form of a surface. If you select the corresponding element and call the dialog box for formatting the element, tabstrip *Pattern* will offer you several formatting options.

Prerequisites

The element to be formatted is itself a surface (for example the plot area or the columns in a two-dimensional column chart) or it consists of surfaces (for example the columns in a three-dimensional column chart).

Procedure

1. Click with the right mouse key on the element you want to format.
2. In the context menu, select the function for formatting the element, such as *Format Plot Area* for the plot area.

   A dialog box appears.
3. Choose tabstrip *Pattern*.
4. Make the changes described below and choose OK.

Changing the Filling

You can change the filling with the fields in the *Fill* area.

Automatic

If you want to copy the default formatting, choose *Automatic*.

Color

1. To change the color of the filling, select *Color*.
2. Select the required color or *None* if the surface should not be colored.

Pattern

1. If you want to give the surface a pattern, select *Pattern*.
2. Select one of the patterns and the colors for the foreground and background of the pattern.

Texture

1. If the background of the surface is to be textured, select *Texture*.
2. Choose the texture you want to use.

Gradient

1. If you want to fill the surface with a gradient, choose *Gradient*.
2. Select the direction for the gradient, for example starting at the lower left corner and going up diagonally.
3. Also select the colors between which the gradient should be created.

Image

1. If you want to store an image in bmp or jpeg format as background, select *Image*.
2. Choose a color for the background of the image.
3. Under *Image Style*, define how the image should be inserted. For example you can define that the image should keep its original size or be scaled proportionally to the size of the surface.
4. With *Browse Image* now select the image file.

Transparent

1. To display the entire surface transparently, select *Transparent*.

   You can also see any surfaces lying underneath. This option is normally marked for a normal distribution so that the normal distribution does not hide the data series.
2. With *Pattern* you can define the pattern to be used to display the surface.

Changing Borders

You can change the borders of a surface with the fields in the *Border* area.

- If you want to copy the default formatting, choose *Automatic*.
- If you want to set up your own formatting, choose *Custom.* Under *Style* select the required type of line or *None* if you do not want a border. Also select the color and width of the border.

Changing the Size of Chart Elements

Use

You can change the size of the entire chart by specifying the width and height in pixels or by pulling the chart to the desired size with the mouse.

You can also change the size of the plot area within the chart and the size of the legend.

Procedure

Defining the Width and Height of the Entire Chart

1. Enter the desired values in fields *Width* and *Height* of the window in which you are editing the chart. The entries should be in pixels.
2. Choose *Apply*.

The size of the entire chart is changed according to your specifications.

Changing the Size of the Entire Chart with the Mouse

1. Point to the border of the preview window with the mouse.

   The cursor becomes a double arrow.
2. Click on the border and pull the preview window to the required size.
3. The size of the entire chart is changed when you let go of the mouse key.

Changing the Size of the Plot Area or the Legend with the Mouse

1. Click on the element whose size you want to change (plot area or legend).

   The element is enclosed in a move handle.
2. Point to one of the move handles with the mouse.

   The cursor becomes a double arrow.

   If the cursor does not become a double arrow, you might not have selected the right element, for example the chart area instead of the plot area. In this case click again on the element whose size you want to change.
3. Click on the move handle and keep the mouse key pressed.

   The cursor becomes a cross.
4. Pull the element to the desired size.
5. The size of the element is changed when you let go of the mouse key.

   Avoid stretching the plot area over the whole area of the chart. The outermost border of the plot area disappears from the visible area in this case and cannot be clicked on again. You cannot change the size of the plot area. If you made the plot area too large by accident, you can undo it with the menu option *Undo* in the context menu. You can reset the plot area to its original size with *Reset*, but you will lose all the changes you made to the chart.

Changing the Position of Chart Elements

Use

You can change the position of the following elements directly in the chart:

- Plot area
- Data label
- Axis title
- Axis unit
- Value range title
- Normal distribution title

You can change the position of the chart title if you permitted this when you added the title. See Adding and Removing Chart Titles [Seite 124]. You can change the position of the legend directly in the chart if you permitted this when you added the legend. See Adding and Removing Legends [Seite 133].

Procedure

Changing the Position of a Data Label

1. Click on the data label whose position is to be changed.
2. Click again on the data label, keeping the mouse key pressed.
3. Pull the data label to the required position.
4. Let go of the mouse key.

Changing the Position of Other Elements

1. Click on the element whose position is to be changed. Keep the mouse key pressed.
2. Pull the element to the new position.
3. Let go of the mouse key.

You can also change the position of the legends by clicking on the outermost border of the legend with the right mouse key and choosing *Format Legend* in the context menu. You can then select the desired position on the *Legend* tabstrip.

Removing Chart Elements

Use

You can remove the following elements directly in the chart:

- Chart title
- Axis title
- Axis unit
- Axis including its title and corresponding unit
- Complete value range
- Gridlines
- Complete legend
- Data label for a data series
- Normal distribution

Procedure

1. Click on the element you want to remove.
2. Press <Del>.

You can also remove legends, value ranges and normal distributions by clicking on the element with the right mouse key and choosing *Delete* in the context menu.

Chart Types

Definition

The chart type defines how your data will be edited graphically.

The chart types for stock, milestone and multicolorbars are not supported at the moment.

The chart types can be divided into four classes when they are edited. With chart types of the same class, the rows and columns of the underlying table (that is of the data provider) are edited immediately.

The class to which each chart type belongs is given below. Before you begin publishing a chart, you should define which chart type you want to display. You can find out how the data provider should be built based on the class of the chart type. You can then select an existing query or formulate a new query with which the suitable view on the data can be created. This is the suitable data provider.

Column Charts

Comparisons between individual elements are shown in a column. Categories are arranged horizontally and values are arranged vertically.

To show changes within a certain time interval, you can use either column charts or XY scatter charts.

The relationship between indivdidual elements and the entire chart is shown in stacked columns.

Column charts are chart types of class 1 [Seite 64].

Bar Charts

Comparisons between individual elements are shown in a bar chart. Categories are arranged vertically and values are arranged horizontally. The emphasis is on the comparison of values and not on displaying a change during a period of time.

The relationship between indivdidual elements and the entire chart is shown in stacked bars.

Bar charts are chart types of class 1 [Seite 64].

Line Charts

Data trends are shown in a line chart. The data is entered at regular intervals. Categories such as months are normally entered on the X axis and values such as income in dollars on the Y axis.

Line charts are chart types of class 1 [Seite 64].

Profile Charts

In a profile chart the lines are arranged vertically and not horizontally as in a line chart. Otherwise the profile chart corresponds to the line chart.

Profile charts are chart types of class 1 [Seite 64].

Pie Charts

In a pie chart, the proportional part of elements of a data series are displayed in a whole. This chart type has only a single data series and is used primarily to highlight a particularly important element.

You can use the subtypes to define if the pie segments should be displayed next to each other or separately.

Pie charts are chart types of class 1 [Seite 64].

XY Scatter Charts

In an XY scatter chart, either the relationship between numeric values is displayed in several data series or two groups of numbers are entered as a row of XY coordinates. This chart type displays irregular intervals (clusters) and is normally used for scientific data.

Both axes of an XY scatter chart are value axes. In other chart types, the X axis is used to show categories.

XY scatter charts are chart types of class 2 [Seite 73].

Area Charts

The area between the axes and the data series are filled in an area chart. Otherwise the area chart corresponds to the line chart.

An area chart also represents the sum of the entered values and can thus illustrate the relationship of parts to the entire amount.

Area charts are chart types of class 1 [Seite 64].

Doughnuts

As in a pie chart, the relationship between parts of a whole are displayed in a doughnut. In contrast to the pie chart, the doughnut can represent more than one data series, where each ring corresponds to a data series.

You can use the subtypes to define if the rings should be displayed next to each other or separately.

Doughnuts are chart types of class 1 [Seite 64].

Radar Charts

In a radar chart, each category has its own value axis emanating from the middle. The values of a data series are linked with lines.

Radar charts can be used to compare data series: the data series with the highest values occupies the most space.

Radar charts are chart types of class 1 [Seite 64].

Portfolios

A portfolio displays the position of an object (enterprise, product, etc.) in a four-field matrix. The position of the object is defined with two dimensions.

Portfolios are used mainly in enterprise and product comparisons. For example, a portfolio can be sorted like the products of an enterprise by their dimensions economics and strategic significance.

Portfolios are chart types of class 3 [Seite 75].

Surface Charts

Data sets are entered in the form of a surface in a surface chart. A surface chart differs from a line chart in that the points of a data series are displayed one after the other for each category.

As in a topographical map, the colors and patterns represent areas with the same value range.

Surface charts are chart types of class 1 [Seite 64].

Cylinders, Cones and Pyramids

Cones, cylinders and pyramids only differ from bar and line charts in their form. Each of these chart types has subtypes that display the values horizontally or vertically.

Cones, cylinders and pyramids are chart types of class 1 [Seite 64].

Step Charts

In a step chart, values are entered in the form of steps and not points on a curve. Each value corresponds to a horizontal line. The vertical lines link the individual values. For example, the step-by-step development of fix costs can be represented with a step chart.

The X axis is defined as the value axis in step charts. In other chart types, the X axis is used to show categories.

Step charts are chart types of class 2 [Seite 73].

Histograms

The frequency of a characteristic is displayed in a histogram, for example the distribution of the income within an enterprise. The frequency is divided into classes, where each class corresponds to a column in the histogram.

Categories and value ranges are entered on the X axis and the corresponding values on the Y axis in a histogram. The normal distribution is also shown in the histogram depending on the subtype.

Histograms are chart types of class 2 [Seite 73].

Tachometers

In a tachometer, one or more key figures are displayed in the form of a pointer. The tachometer is divided into several value ranges and the user immediately sees the value range in which the pointer is currently positioned.

Tachometers are chart types of class 1 [Seite 64].

Quadrants

In a quadrant, two objects are positioned in a four-field matrix. One object is displayed as a cross, the second object is displayed as a point and positioned relative to the cross.

Quadrants are chart types of class 3 [Seite 75].

Editing Chart Types of Class 1

Chart Types

Class 1 includes the following chart types:

- Bar and column charts
- Area charts
- Line charts
- Cylinders, cones and pyramids
- Pie charts and doughnuts
- Radar charts
- Surface charts
- Profile charts
- Tachometers

Structure of the Data Provider for a Pie Chart

In a pie chart, the underlying table has only one row. The values in the row result from the pie segments of the chart.

If the table contains more than one row, the additional rows are ignored when the table is converted into a chart.

Structure of the Data Provider for a Tachometer

In a tachometer, the underlying table has only one data column. Each value in the data column is displayed in the chart as a pointer. The tachometer will be readable if the data column does not contain too many values.

If the table contains more than one data column, the additional columns are ignored when the table is converted into a chart.

Structure of the Data Provider for the Other Chart Types

You build the underlying table of the other chart types of class 1 as follows:

- The data columns correspond to the categories.
- The rows contain the values for each category. Each row is converted into a data series in the chart.

Example for Bar and Column Charts

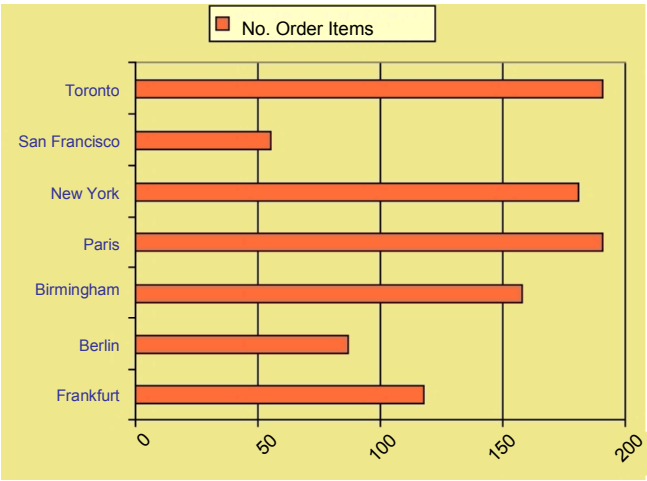
The following graphic shows a data provider that is used as the basis for the chart types described below.

Sales Organization	No. Order Items
Frankfurt	118
Berlin	87
Birmingham	158
Paris	191
New York	181
San Francisco	55
Toronto	191

Values (Data series)

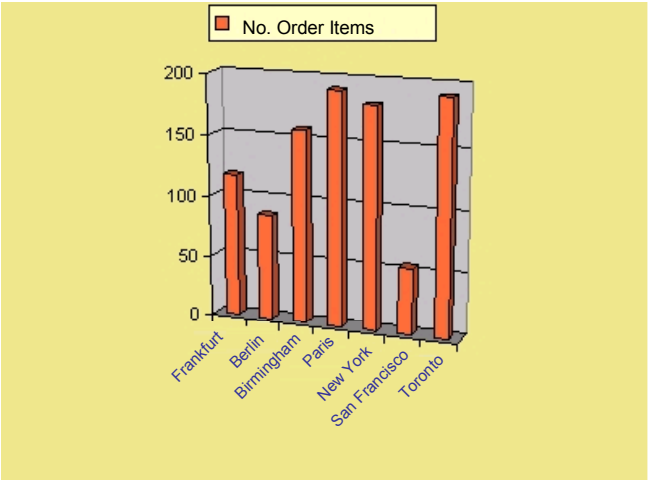
Category

Bar Chart



Column Chart

3D Column Chart



Example for Area Chart

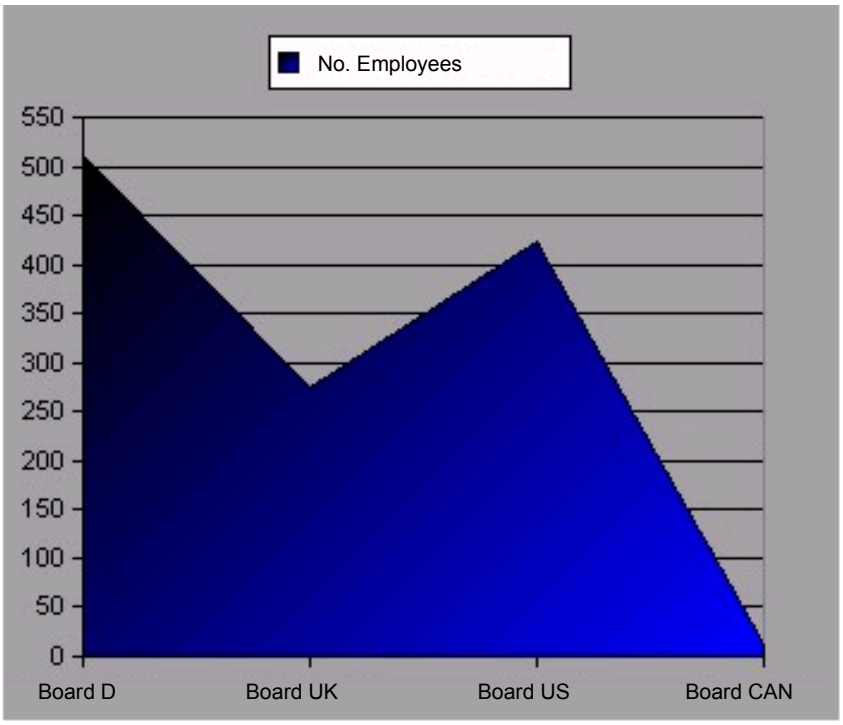
The following graphic shows a data provider that is used as the basis for an area chart.

Organization Unit	No. Employees
Board D	510
Board UK	274
Board US	423
Board CAN	13

Values (Data series)

Category

Below you see an area chart that is based on the data provider.



Example of a Pie Chart

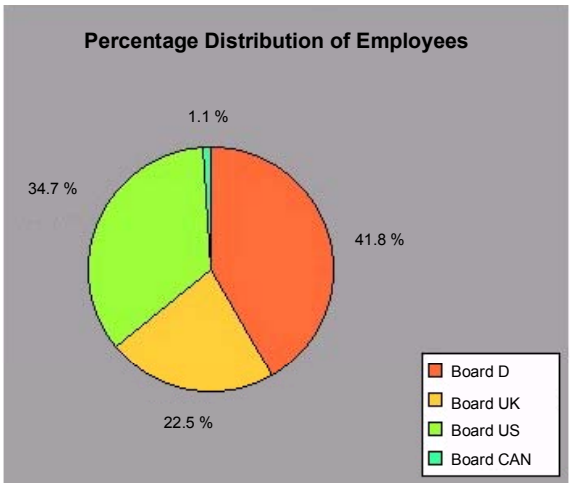
The following graphic shows a data provider that is used as the basis for a pie chart.

Organization Unit	Percentage Distribution of Employees
Board D	41.8 %
Board UK	22.5 %
Board US	34.7 %
Board CAN	1.1 %

Values (Data series)

Category

Below you see a pie chart that is based on the data provider.



Example of a Line and Profile Chart

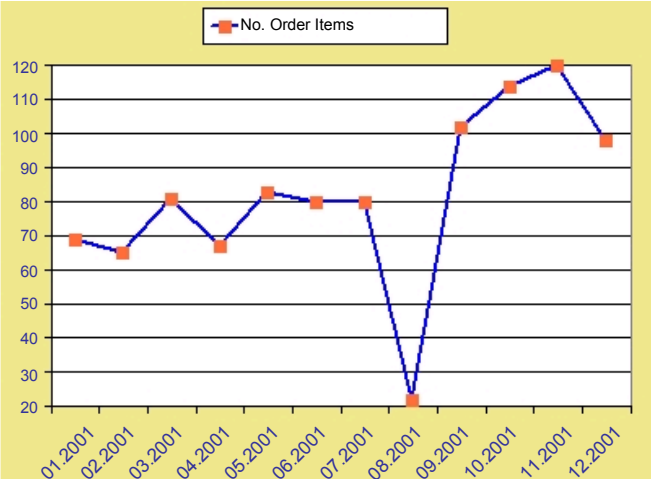
The following graphic shows a data provider that is used as the basis for a line and profile chart.

CalYear/Month	No. Order Items
01.2001	69
02.2001	65
03.2001	81
04.2001	67
05.2001	83
06.2001	80
07.2001	80
08.2001	22
09.2001	102
10.2001	114
11.2001	120
12.2001	98

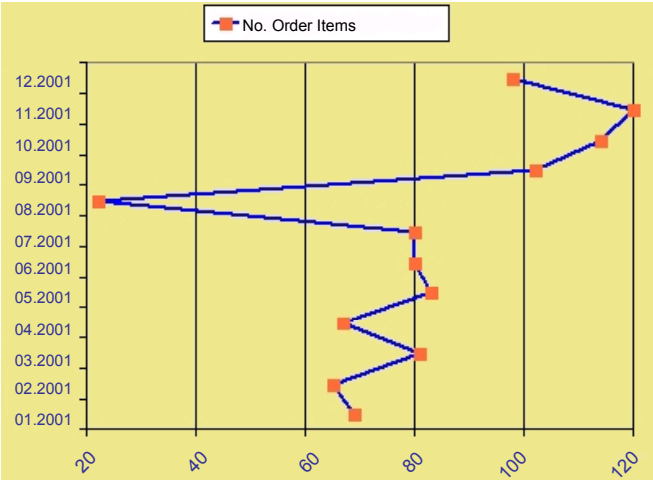
Values (Data series)

Category

Line Chart



Profile Chart



Example of a Radar Chart

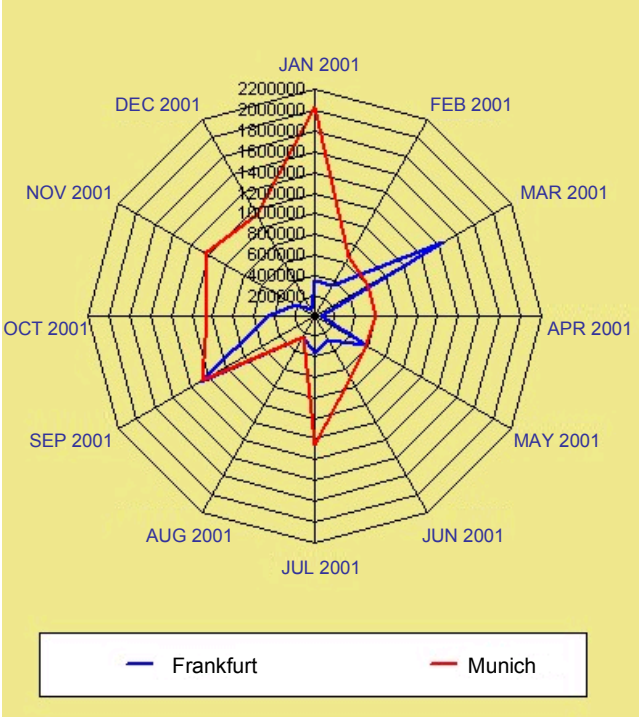
The following graphic shows a data provider that is used as the basis for a radar chart.

CalYear/Month\Sales Organization	Frankfurt	Munich
JAN 2001	$ 353,505.57	$ 2,043,054.25
FEB 2001	$ 353,505.57	$ 681,884.52
MAR 2001	$ 1,445,213.95	$ 595,241.00
APR 2001	$ 74,513.43	$ 595,241.00
MAY 2001	$ 590,042.39	$ 577,912.29
JUN 2001	$272,927.09	$ 713,942.62
JUL 2001	$ 368,234.97	$ 1,262,396.12
AUG 2001	$ 242,601.86	$ 238,269.69
SEP 2001	$ 1,292,721.35	$ 1,262,396.12
OCT 2001	$ 454,661.88	$ 1,054,451.67
NOV 2001	$ 230,904.99	$ 1,232,937.32
DEC 2001	$ 76,246.30	$ 1,143,477.88

Values (Data series)

Category

Below you see a radar chart that is based on the data provider.



Example for Surfaces

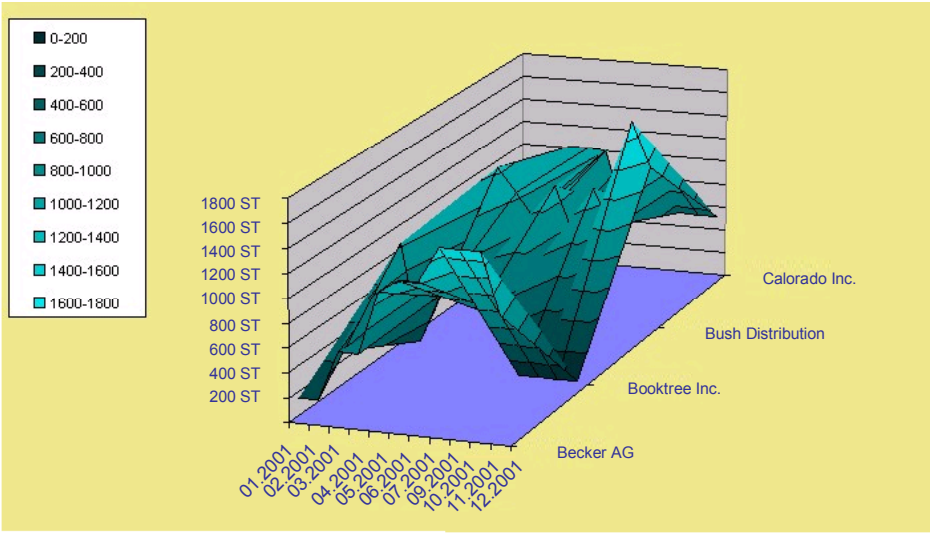
The following graphic shows a data provider that is used as the basis for a surface.

CalYear/Month\ Ordering Party	Becker AG	Booktree Inc.	Bush Disribution	Calorado Inc.
01.2001	210 ST	520 ST	640 ST	510 ST
02.2001	210 ST	1020 ST	640 ST	
03.2001	610 ST	220 ST	1240 ST	1010 ST
04.2001	610 ST	620 ST	1040 ST	1010 ST
05.2001	1120 ST	620 ST	830 ST	1010 ST
06.2001	1230 ST	520 ST	1130 ST	510 ST
07.2001	1230 ST	520 ST	730 ST	510 ST
09.2001	1520 ST	20 ST	1130 ST	510 ST
10.2001	1520 ST	20 ST	830 ST	510 ST
11.2001	1520 ST	20 ST	1730 ST	510 ST
12.2001	1020 ST	20 ST	1350 ST	510 ST

Values (Data series)

Category

Below you see a surface chart that is based on the data provider.



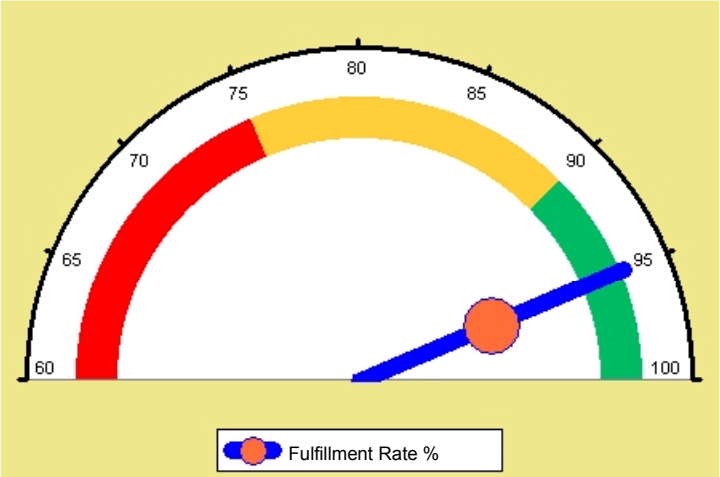
Example of a Tachometer

The following graphic shows a data provider with one data column that only contains one value. This value results in the pointer.

Sales Organization	Fulfillment Rate %
New York	95%

Pointer

Below you see a tachometer that is based on the data provider.



Editing Chart Types of Class 2

Chart Types

Class 2 includes the XY scatter, step and histogram chart types.

Structure of the Data Provider

You build the underlying table of a chart type of class 2 as follows:

- The first data column contains the values to be entered on the X axis.
- The remaining data columns are assigned the Y values. These data columns are converted into data series. The number of data series in the chart is thus computed from the total number of data columns minus 1.

The X value of a data point is always defined by the first data column. The Y value of a data point is defined in one of the remaining data columns, depending on the data series to which the data point belongs.

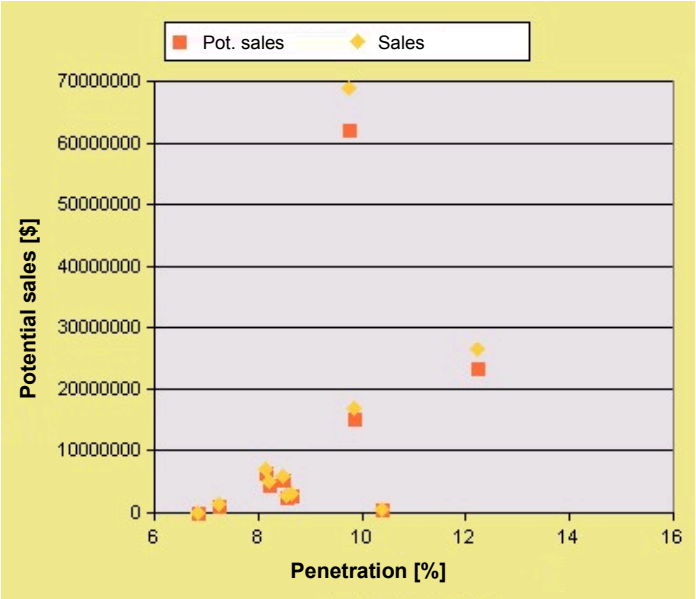
Example for XY Scatter Chart

The following graphic shows a data provider that is used as the basis for an XY scatter chart.

DUNS US 1987 Sic Cod	Penetration %	Potential Sales	Sales
ODB87SIC1	9.75 %	$ 62,264,964.20	$ 68,995,325.63
A	7.23 %	$ 1,174,812.94	$ 1,266,360.63
B	6.82 %	$ 47,301.42	$ 50,762.50
C	8.49 %	$ 5,342,923.87	$ 5,838,424.38
D	8.14 %	$ 6,462,629.13	$ 7,035,273.13
E	8.53 %	$ 2,645,798.36	$ 2,892,398.13
F	8.22 %	$ 4,597,710.86	$ 5,009,276.25
G	9.84 %	$ 15,111,527.82	$ 16,760,058.13
H	8.65 %	$ 2,842,611.88	$ 3,111,659.38
I	12.22 %	$ 23,243,258.36	$ 26,478,784.38
J	10.39 %	$ 494,921.35	$ 552.328,75

X values **Y values**

Below you see an XY scatter chart that is based on the data provider.


Pot. sales
Sales
70000000
60000000
50000000
40000000
30000000
20000000
10000000
0
Potential sales [$]
6
8
10
12
14
16
Penetration [%]

Editing Chart Types of Class 3

Chart Types

The portfolio and quadrant chart types have class 3.

Structure of the Data Provider for a Portfolio

You build the underlying table for a portfolio as follows:

- The first data column contains the values to be entered on the X axis.
- The second data column contains the values to be entered on the Y axis.
- The third data column is relevant for the bubble size.
- You can add further pairs of data columns to the table. The first data column of a pair always contains the Y values and the second data column the bubble size.

The X value of a data point is always defined from the first data column. The Y value of a data point is defined from the second, fourth, etc. data column, depending on the data column to which the data point belongs. The X and Y values together give you the center of the bubble.

Structure of the Data Provider for a Quadrant

A quadrant simply relates two data points to each other. The first data point is displayed as a cross. The second data point is displayed as a point and arranged with respect to the cross. Since only two data points are required, the underlying table should only have two rows.

- The first data column contains the values to be entered on the X axis.
- The second data column contains the values to be entered on the Y axis.

If the table contains more than two rows, the additional rows are ignored when the table is converted into a chart.

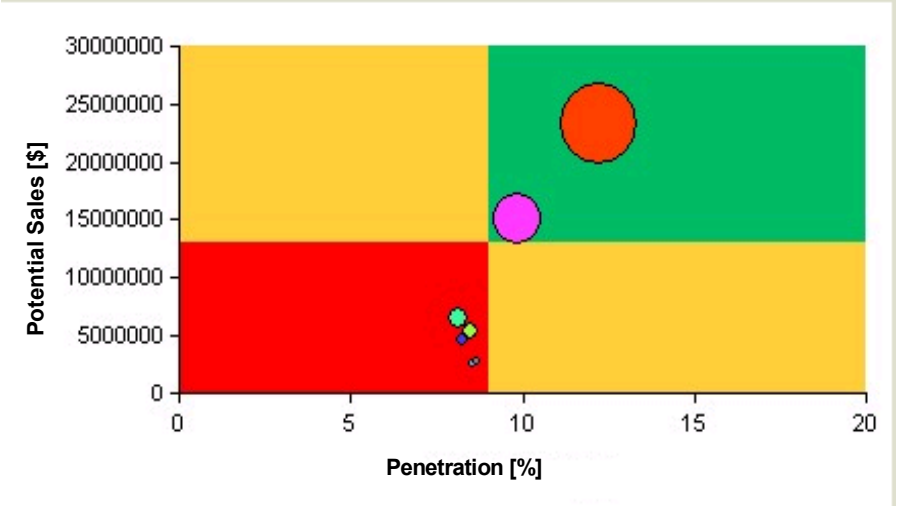
Portfolio Example

The following graphic shows a data provider that is used as the basis for a portfolio.

DUNS US 1987 Sic Cod	Penetration %	Potential Sales	Sales
ODB87SIC1	9.75 %	$ 62.264.964,20	$ 68.995.325,63
A	7.23 %	$ 1,174,812.94	$ 1,266,360.63
B	6.82 %	$ 47,301.42	$ 50,762.50
C	8.49 %	$ 5,342,923.87	$ 5,838,424.38
D	8.14 %	$ 6,462,629.13	$ 7,035,273.13
E	8.53 %	$ 2,645,798.36	$ 2,892,398.13
F	8.22 %	$ 4,597,710.86	$ 5,009,276.25
G	9.84 %	$ 15,111,527.82	$ 16,760,058.13
H	8.65 %	$ 2,842,611.88	$ 3,111,659.38
I	12.22 %	$ 23,243,258.36	$ 26,478,784.38
J	10.39 %	$ 494,921.35	$ 552,328.75

X values **Y values** **Bubble size**

Below you see a portfolio that is based on the data provider.



Changing the Chart Type

Use

A chart is normally displayed as a bar chart. You can change the chart type [Seite 61] for the entire chart.

You can also combine multiple chart types in the same chart by changing the chart type of a single data series. For example you can display the planned turnover of several subsidiaries and show the average current turnover as a line.

Procedure

Changing the Chart Type of an Entire Chart

1. Click on the chart with the right mouse key.
2. In the context menu choose *Chart Type*.

   This brings you to the *Chart Options* dialog box.

   The field *Assign to all data rows* is selected and inactive. This shows you that the chart type is changed for the entire chart and not only for a single data series.
3. First select the type and then the required subtype.
4. Choose *OK*.

Changing the Chart Type of a Single Data Series

1. Click with the right mouse key on the data series whose chart type you want to change.
2. In the context menu choose *Chart Type*.

   This brings you to the *Chart Options* dialog box.
3. First select the chart type and then the required subtype.

   If you mark the field *Assign to all data rows*, the chart type is changed for the entire chart, even if you only marked a single data series.
4. Choose *OK*.

Axes and Gridlines

Definition

Most of the chart types have two axes: a value axis and a category axis. With most chart types, the values of a data series are plotted along the value axis and the categories along the category axis. Normally the value axis corresponds to the Y axis and the category axis to the X axis.

Three-dimensional chart types such as cone and pyramid charts also have a third (Z) axis.

Gridlines are vertical and horizontal lines that divide up the plotting area. They improve the readability of the individual chart values.

Use

The properties that you can define for axes are listed below. The properties that you can define depend on the chart type you selected.

- Showing and Hiding Axes [Seite 79]
- Changing the Position of the Tick Marks [Seite 80]
- Changing the Scale [Seite 81]
- Changing the Point of Intersection of Axes [Seite 82]
- Reversing the Order of Categories and Values [Seite 84]
- Formatting Axes and Axis Labels [Seite 85]

You can only use the following functions for value axes:

- Changing the Start and End Points of a Value Axis [Seite 86]
- Changing the Value Axis Intervals [Seite 87]
- Adding a Value Range [Seite 89]
- Formatting a Value Range [Seite 90]
- Formatting the Value Range Title [Seite 91]
- Changing the Title and Values of a Value Range [Seite 92]

You can change the minor tick mark and tick mark label intervals [Seite 88] for category axes.

You can choose from the following functions for gridlines:

- Showing and Hiding Gridlines [Seite 94]
- Editing Gridlines [Seite 95]

Showing and Hiding Axes

Use

You can decide whether to display axes in a chart and which axes should be displayed.

Pie charts and doughnuts do not have axes.

Procedure

1. Click with the right mouse key on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Axes*.
4. Select the axes you want to show. Deselect the axes you want to hide.

   Primary axis describes the normal axis in the coordinate system and *Secondary axis* describes the opposite axis.
5. Choose *OK*.

Changing the Position of the Tick Marks

Use

You can show or hide tick marks for the axes. You can also define if the tick marks should be displayed outside, inside or on both sides of the axes. You can define these settings separately for the major and minor tick marks. Minor tick marks are a subdivision of the major tick marks.

You can make all the settings separately for each axis.

Prerequisites

The axis to be changed is displayed. See Showing and Hiding Axes [Seite 79].

Procedure

1. Click with the right mouse key on the axis you want to change.
2. In the context menu choose *Format Axis*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Line*.
4. Define the *Major tick mark type* and *Minor tick mark type*.

- *None*: Do not show any tick marks
- *Outside*: Show tick marks outside the axis
- *Inside*: Show tick marks inside the axis
- *Cross*: Show tick marks both outside and inside the axis

5. Choose *OK*.

Changing the Scale

Use

You can choose one of the following scales when you use value axes:

- Linear
- Logarithmic

You can only change the scale for value axes, but not for category axes. It does not matter if the X axis or the Y axis is the value axis.

The time scale type is not relevant in Web Publishing.

Prerequisites

The axis to be changed is a value axis.

Procedure

1. Click with the right mouse key on the value axis you want to change.
2. In the context menu choose *Format Axis*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Scale*.
4. In the *Type* field choose the required type of scale.
5. Choose *OK*.

Changing the Point of Intersection of Axes

Use

You can change the point where the axes cross in a chart. You can also define if the point of intersection should always lie between categories or on a category.

Procedure

Changing the Point of Intersection for the Category Axis

1. Click with the right mouse key on the category axis (normally the X axis).
2. In the context menu choose *Format Axis*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Scale*.
4. Enter the desired setting. Your setting moves the position of the value axis (normally the Y axis) in the chart:

- If you want the point of intersection to lie on a certain category, select *Custom* in the *Value axis crosses at* list and enter the number of the category.
- If you want to move the value axis to the right border of the chart, select *Maximum* in the *Value axis crosses at* list.
- If you want to move the value axis to the right border of the chart, select *Maximum* in the *Value axis crosses at* list.
- To compute the point of intersection automatically, select *Automatic* in the *Value axis crosses at* list.

5. Choose *OK*.

Positioning a Point of Intersection on a Category or between Categories

The point of intersection for value axes and category axes lies between the categories by default. However, you can also define that the point of intersection should lie exactly on a category.

1. Click with the right mouse key on the category axis (normally the X axis).
2. In the context menu choose *Format Axis*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Scale*.
4. Choose the setting you want to use.

- If you want the point of intersection of the value axis and the category axis to lie between the categories, select the *Value axis crosses between categories* field. With this setting, the major tick marks of the category axis are displayed between the categories.
- If you want the point of intersection to lie exactly on a category, deselect this field. With this setting, the major tick marks of the category axis are displayed directly below the categories.

5. Choose *OK*.

Changing the Point of Intersection for the Value Axis

1. Click with the right mouse key on the value axis (normally the Y axis).
2. In the context menu choose *Format Axis*.

This brings you to the dialog box with the same name.

3. Choose tabstrip *Scale*.
4. Enter the desired setting. Your setting moves the position of the category axis (normally the X axis) in the chart:

- If you want the point of intersection with the category axis to lie at a certain value, select *Custom* in the *Category axis crosses at* list and enter the desired value.
- If you want to move the category axis to the upper border of the chart, select *Maximum* in the *Category axis crosses at* list.
- To move the category axis back to the lower border of the chart, select *Minimum* in the *Category axis crosses at* list.
- To calculate the point of intersection automatically, select *Category axis crosses at*.

5. Choose *OK*.

Reversing the Order of Categories and Values

Use

You can reverse the order of the categories and the values in most of the chart types. This is not possible for radar charts.

Procedure

1. Click with the right mouse key on the axis you want to change.
2. In the context menu choose *Format Axis*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Scale*.
4. Select the appropriate field for the axis.

- To reverse the order of the categories on the category axis, select field *Categories in reverse order*.
- To reverse the order of the values on the value axis, select field *Values in reverse order*.

5. Choose *OK*.

Formatting Axes and Axis Labels

Use

You can format the line of each axis individually.

You can also change the formatting of the axis labeling for each axis. You can also change the font properties and alignment of the axis labeling. You can define the format of the numbers that are displayed in the axis label. For example, you can select a percentile display or display the values with their currency. You can also display numbers with decimal places.

Procedure

1. Click with the right mouse key on the axis whose line or axis label you want to change.
2. In the context menu choose *Format Axis*.

   This brings you to the dialog box with the same name.
3. Make the changes described below and choose OK.

Changing Lines

1. Choose tabstrip *Line*.
2. Select the required formatting for the type of line, the color and the axis width.

Changing Font Properties

1. Choose tabstrip *Font*.
2. Select the required font properties for the axis label: font name, style (bold, italic, etc.), the size in points and the color.

Changing the Number Format

1. Choose tabstrip *Number*.
2. In field *Category* choose the required category, e.g. *Date* for date formats.
3. In field *Number formats* choose the required format within the category.
4. If you are not yet satisfied with the format, you can change it directly in field *Number format*.

Changing the Alignment

1. Choose tabstrip *Alignment*.
2. Select the required arrangement of the axis label, e.g. from left to right, from top to bottom or rotated by 90 degrees.

Changing the Start and End Points of a Value Axis

Use

You can determine the start and end points of a value axis automatically or define them manually.

Prerequisites

The axis to be formatted is a value axis and not a category axis.

Procedure

1. Click with the right mouse key on the value axis (normally the Y axis).
2. In the context menu choose *Format Axis*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Scale*.
4. Make the changes described below and choose OK.

Defining the Start and End Points Automatically

1. To define the start point automatically, select field *Minimum* in column *Auto*.
2. To define the end point automatically, select field *Maximum* in column *Auto*.

Changing the Start and End Points Manually

1. Deselect field *Minimum* or *Maximum* in column *Auto*.
2. Enter the required value in field *Minimum* or *Maximum*.

Changing the Value Axis Interval

Use

You can change the interval for the value axes, that is define the interval for the tick marks. You can change these values separately for the major and minor tick marks.

Prerequisites

The axis to be formatted is a value axis with a linear or logarithmic scale. See Changing the Scale [Seite 81].

Procedure

1. Click with the right mouse key on the value axis (normally the Y axis).
2. In the context menu choose *Format Axis*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Scale*.
4. Make the changes described below and choose *OK*.

Changing the Interval Manually

1. Deselect field *Major unit* for the major tick marks or *Minor unit* for the minor tick marks.
2. Enter the interval you want in fields *Major unit* or *Minor unit*.

   You can only see the change if the major tick marks or minor tick marks are displayed. See Changing the Position of the Tick Marks [Seite 80].

Defining the Interval Automatically

Select field *Major unit* for the major tick marks or *Minor unit* for the minor tick marks.

Changing Minor Tick Mark and Minor Tick Mark Label Intervals

Use

Every category on the category axis is labeled and is separated from the other categories with tick marks (major tick marks).

You can define the intervals in which the category axes should be labeled. Normally every category is labeled, but you can for example label only every second or third category.

You can also define that more than one category should be displayed between the tick marks so that the category axis has fewer tick marks. Normally exactly one category is displayed between two tick marks (major tick marks) on the category axis.

Procedure

1. Click with the right mouse key on the category axis (normally the X axis).
2. In the context menu choose *Format Axis*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Scale*.
4. To change the distance between the labels, enter the appropriate value in field *Number of categories between tick mark labels*. Enter 1 to label each category, enter 2 to label every second category, and so on.
5. To change the distance between the tick marks, enter how many categories there should be between two tick marks in field *Number of categories between tick marks*.
6. Choose *OK*.

Adding a Value Range

Use

You can define a value range that should be highlighted in the chart. You can define a minimum, optimum and maximum value within the value range. These values are displayed in the chart with a line and can be assigned a title.

Prerequisites

The axis to which the value range belongs is a value axis and is displayed in the chart. See Showing and Hiding Axes [Seite 79].

Procedure

1. Click with the right mouse key on the value axis (normally the Y axis).
2. In the context menu choose *Add Value Range*.

   You go to the *Format Value Range* dialog box.
3. Repeat the following steps for all the values (minimum, optimum, maximum) you want to mark in the chart:
4. Enter a title for the relevant value.
5. Define where the value should lie:

- If you want the position of the value to be defined automatically, select *Automatic*.
- If you want to predefine a value, select the *Value* field and enter the minimum, optimum or maximum value.
- If you do not want to mark a value in the chart, select the *Invisible* field for the corresponding value.

6. Choose *OK*.

Formatting Value Ranges

Use

Every value range can have a minimum, optimum and maximum value. You can format the lines that represent these values. You can also define a filling for the entire value range.

Prerequisites

You already added a value range. See Adding a Value Range [Seite 89].

Procedure

Click with the right mouse key on the upper or lower border of the value range you want to format.

1. In the context menu choose *Format Value Range*.

   This brings you to the dialog box with the same name.

2. Make the changes described below and choose OK.

Changing the Filling and Border

1. Choose tabstrip *Pattern*.
2. Select the formatting for the filling and for the upper and lower borders of the value range. See Changing the Filling and Borders of Surfaces [Seite 55].

   The upper border normally corresponds to the maximum value of the value range and the lower border corresponds to the minimum value.

Changing Lines

1. Choose tabstrip *Line*.
2. Select the required formatting for the type of line and the color of the line within a value range.

   This setting only refers to the line within a value range. This is normally the line for the optimum value. The upper and lower lines of the value range can be formatted with the *Pattern* tabstrip.

Formatting the Value Range Title

Use

Every value range can have a minimum, optimum and maximum value. You can format the titles for these values individually.

Prerequisites

You already added a value range and defined titles for the values. See Adding Value Ranges [Seite 89].

Procedure

1. Click with the right mouse key on the title of the value you want to format.
2. In the context menu choose *Format Value Range Title*.

   This brings you to the dialog box with the same name.
3. Make the changes described below and choose *OK*.

   You can change the titles of all the values of the current value range with tabstrip *Value Range*. However, all formatting selected in the other tabstrips only refer to the title you selected before calling the dialog box.

Changing the Filling and Border

1. Choose tabstrip *Pattern*.
2. Choose the required formatting for the filling and for the border of the box surrounding the title. See Changing the Filling and Border of Surfaces [Seite 55].

Changing Font Properties

1. Choose tabstrip *Font*.
2. Select the required font properties for the title: font name, style (bold, italic, etc.), the size in points and the color.

Changing the Alignment

1. Choose tabstrip *Alignment*.
2. Select the required arrangement of the title, e.g. from left to right, from top to bottom or rotated by 90 degrees.

Changing the Title and Values of a Value Range

Use

You can change a value range after defining it. The minimum, optimum and maximum values can be changed as well as the relevant titles for these values.

Prerequisites

You already added a value range. See Adding a Value Range [Seite 89].

Procedure

Changing the Values of the Value Range from a Dialog Box

1. Click with the right mouse key on the upper or lower border of the value range you want to change.
2. In the context menu choose *Format Value Range*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Value Range*.
4. Enter the new value.
5. Choose *OK*.

Changing Values of the Value Range Directly in the Chart

If you entered the values yourself when you added the value range, you can change the values directly in the chart. If you defined the values automatically, you can only change them from the *Format Value Range* dialog box.

To change the values directly in the chart:

1. Click on the upper or lower border of the value range.

   The value range is selected.
2. Point to the line representing the value to be changed.

   The cursor becomes a double arrow.
3. Click on the line and keep the mouse key pressed.
4. Pull the line to the required value and let go of the mouse key.

Changing Titles of Values

1. Click on one of the titles in the value range with the right mouse key.
2. In the context menu choose *Format Value Range Title*.
3. This brings you to the dialog box with the same name.
4. Choose tabstrip *Value Range*.
5. Enter the new title.

   You can change the titles of all the values of the current value range with tabstrip *Value Range*. However, all formatting selected in the other tabstrips only refer to the title you selected before calling the dialog box.

6. Choose *OK*.

Showing and Hiding Grid Lines

Use

You can make it easier to read values by displaying major and minor gridlines for both the X and Y axes. You can also define the axes (main axis, secondary axis) for which the grid lines should be displayed.

Prerequisites

The chart is neither a pie chart nor a doughnut.

Procedure

1. Click with the right mouse key on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Gridlines*.
4. Select the *Major gridlines* and *Minor gridlines* you want to display.
5. Deselect the gridlines you want to hide.
6. Choose *OK*.

Editing Gridlines

Use

You can format the type of line, color and width of the gridlines individually. You can define these properties separately for each type of gridline, for example you can format the major gridlines of the X axis differently from those of the Y axis.

For the gridlines you can also change the scaling of all the properties that you can change for the axes. Which properties these are depends on whether you are editing gridlines of the category axis or of the value axis.

Procedure

1. Click with the right mouse key on the gridlines you want to format, for example the major gridlines of the X axis.
2. In the context menu choose *Format Gridlines*.

   This brings you to the dialog box with the same name.
3. Make the changes described below and choose OK.

Changing Lines

1. Choose tabstrip *Line*.
2. Select the required formatting for the type of line, the color and the gridline width.

Changing Other Properties

1. Choose tabstrip *Scale*.
2. Make the required changes.

   Gridlines always has the same scaling properties as the corresponding axis. All the changes you make in tabstrip *Scale* therefore directly affect the corresponding axis. For example, if you change the interval of the minor gridlines for the value axis, the interval of the value axis is also changed appropriately.

Data Series and Data Points

Definition

A data series consists of related data points. Each data series is uniquely identified by its own color or pattern. In a pie chart, only one data series is displayed. In other chart types you can display more than one data series.

A data point is a single element of a data series. For example, a data point is displayed by a slice of a pie, a point or a bar.

Use

You have a number of formatting options for data series and data points. Note that the preview window only shows sample data. You only see the actual data once it has been published.

You should change the preview window settings so that the number of data series and data points correspond to the data provider. You can then change the formatting of individual data series. For chart types of class 1, the uppermost data series in the legend corresponds to the first table row, the next data series corresponds to the second table row, etc.

You can edit data series as follows:

- Plotting a Data Series to a Secondary Axis [Seite 98]
- Formatting Data Series [Seite 99]
- Smoothing Lines [Seite 101]
- Adding, Changing and Removing Trendlines [Seite 102]
- Formatting Trendline Equations [Seite 104]
- Adding and Removing Error Bars [Seite 105]
- Editing Error Bars [Seite 107]

The following functions are only available for pie charts and ring charts:

- Rotating Pie and Ring Charts [Seite 113]
- Deactivating the Color Change for a Pie or Ring Chart [Seite 114]
- Changing the Ring Width [Seite 115]

The following functions are only available for histograms:

- Adding and Removing Normal Distributions [Seite 108]
- Editing a Normal Distribution [Seite 109]
- Formatting the Title of a Normal Distribution [Seite 110]

The following functions are only available for tachometers:

- Formatting the Tachometer Needle Label [Seite 111]
- Changing the Value Range of a Tachometer [Seite 112]

The following functions refer to 3D charts:

- Changing the Depth of 3D Charts [Seite 116]
- Formatting Walls and Floors [Seite 117]

In a portfolio or quadrant chart you can change the position of the quadrants [Seite 118]. If required, you can add drop lines [Seite 119] to a surface, profile or line chart.

You can edit the data points of a data series as follows:

- Formatting Data Points [Seite 120]
- Changing the Distance between Groups of Data Points [Seite 121]
- Changing the Overlapping of Data Points [Seite 122]

Plotting a Data Series to a Secondary Axis

Use

If the value ranges of data series vary considerably or if mixed data types are used, you can plot one or more data series to a secondary axis (Y axis). For example, you can plot the number of houses sold on the left Y axis (main axis) and the average price on the right Y axis (secondary axis).

Procedure

1. Click with the right mouse key on the data series for which you want to plot a secondary axis.
2. In the context menu choose *Format Data Series*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Axes*.
4. Select option *Secondary axis*.
5. Choose *OK*.

Formatting Data Series

Use

You can format each data series in a chart individually. Data series are displayed as lines, as surfaces or, in the case of a tachometer, as tachometer needles, depending on the chart type. The options available depend on how the data series is displayed.

Procedure

1. Click with the right mouse key on the data series you want to format.
2. In the context menu choose *Format Data Series*.

   You can also select the data series to be formatted in context menu *Format Data Series* and in the submenu.

   This brings you to the dialog box with the same name. Depending on the chart type, tabstrip *Pattern*, *Line* or *Pointer* is displayed.
3. Make the changes described below and choose OK.

Changing Surfaces

1. If the data series is to be displayed as a surface (e.g. for bar or pie charts),choose tabstrip *Pattern*.
2. Select the formatting for the filling and for the border of the surfaces. See Changing the Filling and Borders of Surfaces [Seite 55].

Changing Lines

1. If you want to display the data series as a line (e.g. for line charts or radar charts), choose tabstrip *Line*.
2. Select the required formatting for the type of line, the color and the line width.
3. With *Marker* you can also define the symbol with which the individual data points should be displayed and how the symbol should be formatted.

- If you want to copy the default formatting, choose *Automatic*.
- If you do not want to mark the data points, choose *None*.
- If you want to set up your own formatting, choose *Custom.* In the *Style* list, choose the symbol to be used to display the data points. If required, change the colors of the symbol and define the size of the symbol in field *Size*.

Changing the Tachometer Needle

1. For a tachometer, choose tabstrip *Pointer*.
2. Under *Line* select the required formatting for the tachometer needle. You can define the type of line, color and breadth of the tachometer needle. You can also give the tachometer needle an arrowhead and define its size.
3. With *Marker* you can also define the symbol to be displayed on the tachometer needle and how the symbol should be formatted.

- If you want to copy the default formatting, choose *Automatic*.
- If you do not want to display a symbol, choose *None*.

- If you want to set up your own formatting, choose *Custom.* In the *Style* list, choose the symbol to be displayed on the tachometer needle. If required, change the colors of the symbol and define the size of the symbol in field *Size*.

4. If you want to label the tachometer needle, select the *Label* field under *Pointer Label* and enter the text.

Smoothing Lines

Use

For data series that have the form of a line (for example in line or profile charts), an interpolated curve is drawn between related data points. You can smooth the curve if necessary. This does not change the underlying data.

Prerequisites

The chart to be formatted is a line chart, radar chart, profile chart or point chart.

Procedure

1. Click with the right mouse key on the data series you want to format.
2. In the context menu choose *Format Data Series*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Line*.
4. Select *Smooth*.
5. Choose *OK*.

Adding, Changing and Removing Trendlines

Use

You can visualize the trend of a data series using a trendline for a number of chart types. You can also extend the trendline past the data series in the chart in order to forecast future values and derive past values. There are the following types of trendlines:

- Linear: A linear trendline is an optimized straight line that is suitable for linear datasets. A dataset is linear if the pattern of data points resembles a line. A linear trendline normally displays a constant increase or decrease in values.
- Logarithmic: A logarithmic trendline is an optimized curve that is ideal if the rate of changes to the data first increases or decreases sharply and then stays nearly the same. A logarithmic trendline can use negative and/or positive values.
- Potential: A potential trendline is a curve. It should be used for datasets that compare measurements that increase with a certain rate (for example, the acceleration of a racing car in 1 second intervals). You cannot add a potential trendline if your data contains null or negative values.
- Exponential: An exponential trendline is a curve that is suitable for data values that increase or decrease with an increasing tendency. You cannot add an exponential trendline if your data contains null or negative values.
- Floating average: The floating average smoothes out data fluctuations and therefore can show a trend or pattern more clearly. The floating average consists of a series of averages that are computed from elements of the data series. A floating average uses a certain number of data points, computes there mean value and then uses this mean value as a point in the curve.

You can change all the properties of a trendline that you can define when you add the trendline. You can delete a trendline that you do not need.

Prerequisites

The chart is a two-dimensional bar, surface, line, portfolio, profile, point or column diagram or a histogram.

Procedure

Adding Trendlines

1. Click with the right mouse key on the data series for which you want to compute the trend.
2. In the context menu choose *Add Trendline*.

   The *Format Trendline* dialog box appears.
3. On the *Trendline* tabstrip, choose the type of trend you require.
4. The type of trendline and the name of the data series is displayed as legend text in the legend. If you want to use a different legend text, deselect field *Trendline name Automatic* and enter the required text.
5. Not for floating average: The trendline can also display past and future developments. Enter how far in the future (field *Forward*) and past (field *Backward*) the trendline should be displayed.
6. Not for floating average: If you want to display the equation on which the trendline is based in the chart, select field *Display equation on chart*.
7. Only for floating average: Enter the number of data points to be used to compute the average value in field *Periods*. The average values are then used as points of the trendline.
8. If you want to change the line type and color of the line, choose the required options on tabstrip *Line*.

9. Choose *OK*.

Changing Trendlines

1. Click with the right mouse key on the trendline you want to change.
2. In the context menu choose *Format Trendline*.
3. Change the properties and choose *OK*.

Removing Trendlines

1. Click on the trendline you want to remove.
2. Press <Del>.

You can also remove trendlines by clicking on the trendline with the right mouse key and choosing *Delete* in the context menu.

Formatting Trendline Equations

Use

When you add a trendline, you can decide if the equation on which the trendline is based should be displayed in the chart. If you display the equation, you can change the formatting of the equation.

Prerequisites

You added a trendline and defined that the equation should be displayed in the chart.

Procedure

1. Click with the right mouse key on the equation you want to format.
2. In the context menu choose *Format Trendline Label*.

   This brings you to the dialog box with the same name.
3. Make the changes described below and choose OK.

Changing the Filling and Border

1. Choose tabstrip *Pattern*.
2. Choose the required formatting for the filling and for the border of the box surrounding the equation. See Changing the Filling and Border of Surfaces [Seite 55].

Changing Font Properties

1. Choose tabstrip *Font*.
2. Select the required font properties for the equation: font name, style (bold, italic, etc.), the size in points and the color.

Changing the Number Format

1. Choose tabstrip *Number*.
2. In field *Category* choose the required category, e.g. *Number* for number formats.
3. In field *Number formats* choose the required format within the category.
4. If you are not yet satisfied with the format, you can change it directly in field *Number format*.

Changing the Alignment

1. Choose tabstrip *Alignment*.
2. Select the required arrangement of the axis label, e.g. from left to right, from top to bottom or rotated by 90 degrees.

Adding and Removing Error Bars

Use

Error bars graphically show possible errors or unclear data points. This is particularly relevant for charts that show the results of scientific investigations. The selected chart type determines whether or not you can add error bars and defines the axis that the error bar refers to.

You can delete error bars that you do not need.

Prerequisites

You can add error bars for either the Y axis or the X axis for bar charts, surface charts, line charts, profile charts and vertical bar charts as well as for histograms and tachometers. This depends on which of the two axes is the value axis.

You can add error bars for both the X axis and the Y axis for portfolio, point, quadrant and step charts.

Procedure

Adding Error Bars

1. Click with the right mouse key on the data series for which you want to add error bars.
2. In the context menu choose *Format Data Series*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *X Error Bars* or *Y Error Bars*, depending on the chart type and the axis for which you want to add the error bars.
4. Under *Display* choose whether and in which direction the error bars for the X axis or Y axis should be displayed:

- Plus and minus error bars
- Only plus error bars
- Only minus error bars
- No error bars

5. Under *Error amount* choose the method to be used to locate the error.

- If you want to use a constant error amount, select *Fixed value* and enter the value.
- If you want to use a percentile value for the individual data points, select *Percentage* and enter the value.
- If you want to use a certain number of standard deviations from the mean of the values displayed graphically, select *Standard deviation* and enter the number.
- If you want to use the standard error, select *Standard error*.
- If you want to define the error yourself, select *Custom*. Enter the deviation up and down in the fields + and – .

6. Choose *OK*.

Removing Error Bars

1. Click with the right mouse key on the error bars of the data series you want to delete.
2. Press <Del>.

Editing Error Bars

Use

You can format the error bars of a data series individually. You can also change all the properties you defined when you added error bars.

Prerequisites

You already added error bars to a data series.

Procedure

1. Click with the right mouse key on the error bars of the data series that you want to format or change.
2. In the context menu choose *Format Error Bars*.

   This brings you to the *Chart Options* dialog box.
3. Make the changes described below and choose OK.

Formatting Error Bars

1. Choose tabstrip *Line*.
2. Under *Line* choose the required formatting for the type and color of the line.
3. Under *Marker* define whether the error bars should be displayed delimited with lines or without lines.

Changing Error Bars

1. Choose tabstrip *X Error Bars* or *Y Error Bars*, depending on the chart type and the axis for which you want to change the error bars.
2. Change the properties as required. You have the same options as for adding error bars, see Adding and Removing Error Bars [Seite 105].

Adding and Removing Normal Distributions

Use

If you assign chart type Histogram, you can select a subtype that automatically displays the normal distribution for each data series. You can also add normal distributions afterwards.

You can delete a normal distribution that you do not need.

Prerequisites

The chart is a histogram.

Procedure

Adding a Normal Distribution

1. Click with the right mouse key on the data series for which you want to display the normal distribution.
2. In the context menu choose *Add Normal Distribution*.

The normal distribution is displayed in the chart. You can also change the properties of the normal distribution if needed. See Editing the Normal Distribution [Seite 109].

Removing the Normal Distribution

1. Click on the normal distribution you want to remove.
2. Press <Del>.

You can also remove a normal distribution by clicking on it with the right mouse key and choosing *Delete* in the context menu.

Editing a Normal Distribution

Use

You can edit every normal distribution that is displayed for a data series in a histogram. You can define the mean value and standard deviation. You can also define a title for the normal distribution and format the curve.

Prerequisites

The chart is a histogram. Either you selected a subtype that automatically also displays normal distributions or you added normal distributions afterwards.

Procedure

1. Click with the right mouse key on the normal distribution you want to edit.
2. In the context menu choose *Format Normal Distribution*.

   This brings you to the dialog box with the same name.
3. Make the changes described below and choose OK.

Changing the Mean Value

1. Choose tabstrip *Normal Distribution*.
2. Enter the new mean value.

Changing the Standard Deviation

1. Choose tabstrip *Normal Distribution*.
2. Enter the new standard deviation.

Displaying Titles in Charts

1. Choose tabstrip *Normal Distribution*.
2. Select field *Display name on chart* if you also want to display the title displayed in field *Distribution name* in the chart.

Changing Titles

1. Choose tabstrip *Normal Distribution*.
2. Deselect field *Automatic*.
3. Change the title in field *Distribution name*.

Formatting Curves

1. Choose tabstrip *Pattern*.
2. Select the formatting for the filling and border of the curve. See Changing the Filling and Borders of Surfaces [Seite 55].

Formatting the Title of a Normal Distribution

Use

If the title of a normal distribution is displayed in the chart, you can format the font properties and title alignment individually.

Prerequisites

You assigned chart type histogram and selected a subtype that also displays the normal distribution. You also defined that the title of the normal distribution should be displayed in the chart.

Procedure

1. Click with the right mouse key on the title of the normal distribution you want to format.
2. In the context menu choose *Format Normal Distribution Label*.

   This brings you to the *Chart Options* dialog box.
3. Make the changes described below and choose OK.

Changing Font Properties

1. Choose tabstrip *Font*.
2. Select the required font properties for the title: font name, style (bold, italic, etc.), the size in points and the color.

Changing the Alignment

1. Choose tabstrip *Alignment*.
2. Select the required arrangement of the title, e.g. from left to right, from top to bottom or rotated by 90 degrees.

Formatting the Tachometer Needle Label

Use

If you defined that a tachometer should have a tachometer needle label, you can format the label individually.

Prerequisites

You assigned the tachometer needle a label with the Format Data Series [Seite 99] function.

Procedure

1. Click with the right mouse key on the label you want to format.
2. In the context menu choose *Format Pointer Labels*.

   This brings you to the dialog box with the same name.
3. Make the changes described below and choose OK.

Changing Font Properties

1. Choose tabstrip *Font*.
2. Select the required font properties for the text: font name, style (bold, italic, etc.), the size in points and the color.

Changing the Alignment

1. Choose tabstrip *Alignment*.
2. Select the required arrangement of the text, e.g. from left to right, from top to bottom or rotated by 90 degrees.

Changing the Value Range of a Tachometer

Use

A tachometer is normally divided into several value ranges that are displayed in different colors. You can change the start and end of a value range as well as its color.

Procedure

1. Click with the right mouse key on the value range you want to change.
2. In the context menu choose *Format Value Range*.

   This brings you to the *Chart Options* dialog box.
3. Enter the start and end for the value range in fields *From* and *To*.
4. Select a color for the value range.
5. Choose *OK*.

Rotating Pie and Ring Charts

Use

You can change the angle of the first segment of a pie or ring chart, thus rotating the entire pie or ring charts.

Prerequisites

The chart is a pie or ring chart.

Procedure

1. Click with the right mouse key on the pie or on one of the rings of the ring chart.
2. In the context menu choose *Format Data Series*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Options*.
4. In field *Angle of first slice*, enter the number of degrees by which you want to rotate the pie or rings clockwise.
5. Choose *OK*.

Deactivating the Color Change for a Pie or Ring

Use

In pie charts and ring charts, each data point is normally displayed in a different color. However, you can define that all data points of a data series should have the same color. In this case, all the segments of a ring chart are displayed in the same color. All the segments of a slice of the ring chart have the same color in a pie chart.

Prerequisites

The chart is a pie chart or ring chart.

Procedure

1. Click with the right mouse key on the pie chart or on a slice of the ring chart.
2. In the context menu choose *Format Data Series*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Options*.
4. Deselect field *Vary colors by point*.
5. Choose *OK*.

You can also change the color of the pie chart or doughnut slices. See Formatting Data Series [Seite 99].

Changing the Ring Width

Use

In a ring chart, the data series are arranged in rings around an inner circle. The inner circle does not represent a data series. You can define how large the inner circle should be and thus how wide each ring should be. The larger the inner circle, the narrower the rings will be displayed.

Prerequisites

The chart is a ring chart.

Procedure

1. Click on one of the rings with the right mouse key.
2. In the context menu choose *Format Data Series*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Options*.
4. In the *Doughnut hole size* field, enter the percentage the inner circle should occupy in relationship to the entire chart. You can enter a value between 10 and 90 percent.
5. Choose *OK*.

Changing the Depth of 3D Charts

Use

You can change the diagram depth of 3D charts with the following options:

- You can change the depth of the data points, for example the depth of the cone or cylinder.
- You can change the distance from the data points to the back wall.

Prerequisites

The chart is a 3D column, 3D bar, cone, pyramid or cylinder chart.

Procedure

1. Click on the row of data with the right mouse key.
2. In the context menu choose *Format Data Series*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *Options*.
4. To change the depth of the data points, enter the required value in field *Chart depth*. The larger the value, the greater the depth.
5. To change the gap between the back wall and the data points, enter a value between 0 and 500 in field *Gap depth*. The larger the value, the greater the gap.

Formatting Walls and Floors

Use

In a 3D chart, two walls are displayed as the background for the data series and the data series are placed on a floor. You can choose any filling and border as well as walls and floor you like.

Prerequisites

The chart is a 3D chart, for example a pyramid, cylinder or cone diagram.

Procedure

1. Click with the right mouse key on one of the walls or on the floor, depending on which surface you want to format.

   If you cannot select the floor, you should temporarily hide the axis in front of it. See Showing and Hiding Axes [Seite 79]. It is then easier to select the floor. Once you have formatted the floor, you can show the axis again.

2. In the context menu choose *Format Walls* or *Format Floor*.

   This brings you to the *Chart Options* dialog box.

3. Select the formatting for the filling and border. See Changing the Filling and Borders of Surfaces [Seite 55].

4. Choose *OK*.

Changing Quadrants

Use

In a chart of type portfolio or quadrant, the plot area represents four areas (quadrants): normally a red and a green quadrant as well as two yellow quadrants. Normally red symbolizes a negative quadrant, green a positive quadrant and yellow a neutral quadrant. The data points are arranged in these quadrants. As a result, one can immediately see how the turnover of a subsidiary should be evaluated.

You can change the color of the quadrants and define where the transition between the quadrants should be. You can also deactivate display of the quadrants.

Prerequisites

The chart is a portfolio or a quadrant.

Procedure

1. Click with the right mouse key on the plot area, for example on a free area within the X and Y axes.
2. In the context menu choose *Format Plot Area*.

   The *Format Plot* dialog box appears.
3. Click on the legend with the right mouse key.
4. Select tabstrip *Quadrants*.
5. To change the transition between the quadrants, enter the new values in fields *X-Axis* and *Y-Axis*.
6. To change the colors, select under *Colors* the colors for the *Top-Left*, *Top-Right*, *Bottom-Left* and *Bottom-Right* quadrants.
7. If you do not want to display any quadrants, deselect the *Visible* field.
8. Choose *OK*.

Showing and Hiding Drop Lines

Use

In surface and line charts you can display drop lines that go from the data point to the X axis. This shows you the position of the individual data points, especially in surface charts.

If you do not want to display drop lines, you can hide them.

Prerequisites

The chart is an area, profile or line chart.

Procedure

1. Click on the data series with the right mouse key.
2. In the context menu choose *Format Data Series*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Options*.
4. If you want to display drop lines, select field *Drop lines.* If you do not want to display drop lines, deselect this field.
5. Choose *OK*.

Formatting Data Points

Use

You can format each data point in a chart individually. The options available depend on the chart type.

Procedure

1. Click on the data series to which the data point to be formatted belongs.

   The entire data series is selected.

2. Click on the data point to be formatted.

   Only the data point is selected.

3. Click on the data point with the right mouse key.
4. In the context menu choose *Format Data Point*.

   This brings you to the dialog box with the same name. Depending on the chart type, tabstrip *Pattern*, or *Line* is displayed.

5. Make the changes described below and choose OK.

Changing Surfaces

1. If you want to display the data point in the form of a surface (e.g. for bar or pie charts), choose tabstrip *Pattern*.
2. Select the formatting for the filling and for the border of the surfaces. See Changing the Filling and Borders of Surfaces [Seite 55].

Changing Lines

1. If the data point lies on a line (e.g. for line charts or radar charts), select tabstrip *Line*.
2. Select the required formatting for the part of the line that belongs to the selected data point. You can define the type of line, color and width of the line.

   The formatting of the rest of the line is not changed by this setting.

3. With *Marker* you can also define the symbol to be used to display the data point and how the symbol should be formatted.

- If you want to copy the default formatting, choose *Automatic*.
- If you do not want to mark the data point, choose *None*.
- If you want to set up your own formatting, choose *Custom.* In the *Style* list, choose the symbol to be used to display the data point. If required, change the colors of the symbol and define the size of the symbol in field *Size*.

Changing the Distance between Groups of Data Points

Use

The data points are arranged in groups for chart types representing data series for example as columns, bars or cylinders. You can change the distance between the groups if required.

Prerequisites

The chart is a column, bar, cone, profile, pyramid or cylinder chart.

Procedure

1. Click on the data series with the right mouse key.
2. In the context menu choose *Format Data Series*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *Options*.
4. Enter a distance between 0 and 500 in field *Distance*. The larger the value, the larger the distance between the groups.
5. Choose *OK*.

Changing the Overlapping of Data Points

Use

You can change how data points overlap for chart types that display data series as columns or bars. Normally data points of a group are arranged next to each other without overlapping.

Prerequisites

The chart is a column or bar chart.

Procedure

1. Click on the row of data with the right mouse key.
2. In the context menu choose *Format Data Series*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *Options*.
4. Enter a value between -100 and 100 in field *Overlap*. The larger the value, the greater the overlapping. The smaller the value, the larger the gap between the data points.
5. Choose *OK*.

Titles, Data Labels and Legends

Definition

A title for the entire chart as well as for each individual axis in the chart can be displayed in a chart.

A data label gives supplementary information for example about a data series or a data point.

The legend explains the colors, patterns and symbols used in a chart.

Use

You can add chart titles, axis titles and data labels and change their formatting. You can also remove all the elements you added:

- Adding and Removing Chart Titles [Seite 124]
- Adding and Removing Axis Titles and Units [Seite 125]
- Formatting Chart Titles, Axis Titles and Units [Seite 126]
- Adding Data Labels [Seite 127]
- Formatting Data Labels [Seite 129]
- Removing Data Labels [Seite 131]
- Changing Texts of Titles, Units and Data Labels [Seite 132]

You can add and format legends. You can also remove legends if required:

- Adding and Removing Legends [Seite 133]
- Formatting Legend Texts and Symbols [Seite 134]
- Formatting the Legend Background [Seite 135]

You can change the position of the chart title and legend directly in the chart if you permitted this when you added the corresponding element. You can change the position of axis titles, units and data labels directly in the chart. See Changing the Position of Chart Elements [Seite 59].

Adding and Removing Chart Titles

Use

You can give the entire chart a title in order to give a brief explanation of the contents of the chart.

You can delete the chart title if it is not required.

Procedure

Adding a Chart Title

1. Click with the right mouse key on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *Title*.
4. Enter the chart title in field *Chart title*.
5. If you want to be able to change the chart title directly in the chart, select field *Editable*.
6. If you want to be able to change the position of the chart title, select field *Moveable*.
7. Choose *OK*.

You can change the formatting of the chart title that has been added, see Formatting the Chart Title, Axis Title and Units [Seite 126].

Deleting the Chart Title

1. Click on the chart title.
2. Press <Del>.

Adding and Removing Axis Titles and Units

Use

You can give the X and Y axes a title. You can also enter the units to be displayed on the axes, for example mill. US $.

If you do not need an axis title or unit, you can delete these elements.

Prerequisites

The axis to be given an axis title or whose unit you want to enter is displayed, see Showing and Hiding Axes [Seite 79].

Procedure

Adding an Axis Title or Unit

1. Click with the right mouse button on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the dialog box of the same name.
3. Choose tabpage *Title*.
4. If you want to add a title or unit to the main axes, enter them in the corresponding fields under *Category (X) axis* and *Value (Y) axis*.
5. If you also want to assign a title or unit for the secondary axes, enter these values in the corresponding fields under *Secondary category (X) axis* and *Secondary value (Y) axis*.
6. Choose *OK*.

You can change the formatting as required once you have added the axis title and units, see Formatting Chart Titles, Axis Titles and Units [Seite 126].

In special cases, you can also display units and currencies automatically. To do this, you have to highlight the special attribute *Automatic Display of Units and Currencies* (AUTOMATIC_LABELS) for the Web item chart in the Web Application Designer. See also Chart [Seite 47].

Removing the Axis Title or Unit

1. Click on the axis title or unit to be deleted.
2. Press the <Del> key.

Formatting Chart Titles, Axis Titles and Units

Use

You can format the chart title and each axis title individually. If you added the axis units, you can also change their formatting.

You can change the filling and border of the box surrounding a title or unit. You can also change the font properties and alignment.

Prerequisites

You already added a chart title, axis title or axis unit, see Adding and Removing Chart Titles [Seite 124] and Adding and Removing Axis Titles and Units [Seite 125].

Procedure

1. Click with the right mouse key on the element you want to format.
2. In the context menu choose *Format Chart Title*, *Format Axis Label* or *Format Axis Title Unit*.

   The dialog box *Format Chart Title* or *Format Axis Label* appears.
3. Make the changes described below and choose OK.

Changing the Filling and Border

1. Choose tabstrip *Pattern*.
2. Select the required formatting for the filling and for the border of the box surrounding the text. See Changing the Filling and Border of Surfaces [Seite 55].

Changing Font Properties

1. Choose tabstrip *Font*.
2. Select the required font properties for the text: font name, style (bold, italic, etc.), the size in points and the color.

Changing the Alignment

1. Choose tabstrip *Alignment*.
2. Select the required arrangement of the text, e.g. from left to right, from top to bottom or rotated by 90 degrees.

Adding Data Labels

Use

You can display data labels in a chart as required and use them, for example, to display the absolute value for all data points. You can add data labels for all data series, for a single data series or for a single data point.

Procedure

Adding Data Labels to all Data Series

1. Click with the right mouse button on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the dialog box of the same name.
3. Choose the *Data Labels* tab page.
4. Choose the required option from those described below.
5. Choose *OK*.

Adding Data Labels to One Data Series

1. Click with the right mouse button on the data series for which you want to add a data label.
2. In the context menu choose *Format Data Series*.

   This brings you to the dialog box of the same name.
3. Choose the *Data Labels* tab page.
4. Choose the required option from those described below.
5. Choose *OK*.

Adding Data Labels to a Data Point

1. Click on the data series to which the data point belongs.

   The entire data series is selected.
2. Click on the data point to which you want to add a data label.

   Only that data point is selected.
3. Click on the data point with the right mouse button.
4. In the context menu choose *Format Data Point*.

   This brings you to the dialog box of the same name.
5. Choose the *Data Labels* tab page.
6. Choose the required option from those described below.
7. Choose *OK*.

Options for Data Labels

The options you can use in the *Data Labels* tabstrip depend on the type of chart you selected. You have the following options:

None: Do not display a data label

Show Value: Display absolute value

Show Percentage: Show the percentile value (only for pie charts and ring charts)

Show Label: Display the text

Show Label and Value: Display the text and the absolute value

Show Label and Percentage: Display the text and the percentile value (only for pie charts and ring chart)

Show Bubble Size: Display the size of the bubble (only for portfolio charts)

Show Label and Bubble Size: Display the text and the size of the bubbles (only for portfolio charts)

The options *Show Bubble Size* and *Show Label and Bubble Size* are **not** supported in SAP BW 3.0.

Formatting Data Labels

Use

You can format the data labels of a data series individually.

Prerequisites

You already added data labels, see Adding Data Labels [Seite 127].

Procedure

1. Click with the right mouse key on one of the data labels belonging to the data series.
2. In the context menu choose *Format Data Labels*.

   This brings you to the *Chart Options* dialog box.
3. Make the changes described below and choose OK.

Changing the Filling and Border

1. Choose tabstrip *Pattern*.
2. Choose the required formatting for the filling and for the border of the box surrounding the data labels. See Changing the Filling and Border of Surfaces [Seite 55].

Changing Font Properties

1. Choose tabstrip *Font*.
2. Select the required font properties for the data labels: font name, style (bold, italic, etc.), the size in points and the color.

Changing the Alignment

1. Choose tabstrip *Alignment*.
2. In the lists *Horizontal* and *Vertical*, select how the text should be arranged within the box surrounding the text.
3. In the list *Position*, select where the data label should be displayed with regard to the data point.

- *Outside end*: At the outmost end of the data point, e.g. directly above a column
- *Inside end*: At the innermost end of the data point, e.g. directly below the upper edge of a column
- *Center*: Centered within a data point
- *Inside base*: At the base of a data point, e.g. directly at the beginning of a column

4. Under *Orientation* select the required arrangement of the title, e.g. from left to right, from top to bottom or rotated by 90 degrees.

Changing the Number Format

1. Choose tabstrip *Number*.
2. In field *Category* choose the required category, e.g. *Date* for date formats.
3. In field *Number formats* choose the required format within the category.
4. If you are not yet satisfied with the format, you can change it directly in field *Number format*.

Removing Data Labels

Use

You can delete data labels that you do not need. You can delete data labels of all the data series or of a single data series.

Procedure

Removing Data Labels for All Data Series

1. Click with the right mouse key on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *Data Labels*.
4. Choose the option *None*.
5. Choose *OK*.

Removing the Data Label of a Single Data Series

1. Click with the right mouse key on the data series whose data label you want to delete.
2. In the context menu choose *Format Data Series*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *Data Labels*.
4. Choose the option *None*.
5. Choose *OK*.

   You can also delete the data label for a single data series by clicking on the data label and pressing <Del>.

Changing Texts of Titles, Units and Data Labels

Use

You can change the text of the following elements directly in the chart:

- Axis title
- Axis unit
- Title of value ranges
- Data titles

You can change the chart title directly in the chart if you permitted this when you added the title. See Adding and Removing Chart Titles [Seite 124]. You cannot change the title of a normal distribution directly in the chart. You can only change it in the properties of the normal distribution. See Editing the Normal Distribution [Seite 109].

Procedure

1. Click on the text to be changed.
2. Click on the selected area.

   The cursor is displayed as a vertical line.

   You might have to click more than once on the selected area for data labels.
3. Change the text.
4. Click on any area of the chart to leave text editing mode and close your changes.

   You can also change the chart title, axis titles and axis units by clicking on the element with the right mouse key and choosing *Chart Options* in the context menu.

Adding and Removing Legends

Use

You can add a legend and define the position in the chart where it should be displayed. In a portfolio chart you can also decide if the legend should show two reference bubbles. These are used for comparison purposes to be able to better estimate the size of the bubbles displayed in the chart.

You can delete a legend that you do not need.

Procedure

Adding Legends

1. Click with the right mouse key on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the dialog box with the same name.
3. Select tabstrip *Legend*.
4. Select the position where the legend should be displayed.
5. If the position of the legend may be changed directly in the chart, select field *Moveable*.
6. If the legend should only be displayed as a symbol, select field *Show on demand*.

   In this case you can click on the legend symbol in the chart to display the legend. If you click on the legend again, it is displayed again as a symbol.

   You can use the options *Moveable* and *Show on demand* when you edit the chart. But in the Web these options cannot be used, i.e. these options are ignored when you publish the graphic.
7. To display reference bubbles in a portfolio, select field *Visible* in the *Reference Bubbles* area. Also define the diameter of the larger reference bubble.
8. Choose *OK*.

Removing Legends

1. Click on the legend.
2. Press <Del>.

   You can also remove legends by clicking on the outermost border of the legend with the right mouse key and choosing *Delete* in the context menu.

Formatting Legend Texts and Symbols

Use

You can change the font properties of all the legend texts or of a single legend text. The font properties include the font type, style (bold, italic, etc.), size in points and color.

You can also format the border and the filling of the legend symbols as you like. Changing the symbol affects the corresponding data series.

Prerequisites

You already added a legend. See Adding and Removing Legends [Seite 133].

Procedure

Formatting All Legend Texts

1. Click on the outermost border of the legends with the right mouse key.
2. In the context menu choose *Format Legend*.

   This brings you to the dialog box with the same name.
3. Select tabstrip *Font* and enter your font properties.
4. Choose *OK*.

Formatting Individual Legend Texts

1. Click with the right mouse key on the legend text you want to format.
2. In the context menu choose *Format Legend Index*.

   This brings you to the dialog box with the same name.
3. Choose the required font properties.
4. Choose *OK*.

Formatting Legend Symbols

1. Click with the right mouse key on the legend symbol you want to format.
2. In the context menu choose *Format Legend Key*.

   This brings you to the dialog box with the same name.
3. Select the formatting for the filling and for the border of the legend symbol. See Changing the Filling and Borders of Surfaces [Seite 55].

   The formatting of the corresponding data series also changed.
4. Choose *OK*.

Formatting the Legend Background

Use

You can format the background of the entire legend. You can choose another filling and change the border surrounding the legend.

Procedure

1. Click on the outermost border of the legends with the right mouse key.
2. In the context menu choose *Format Legend*.

   This brings you to the dialog box with the same name.
3. Choose tabstrip *Pattern*.
4. Select the formatting for the filling and border. See Changing the Filling and Borders of Surfaces [Seite 55].
5. Choose *OK*.

Data Tables

Definition

A data table contains the values on which the data points in the chart are based.

Use

If you also want to show the table values in the chart, you can display the data table (see Showing and Hiding Data Tables [Seite 137]). This option only makes sense for chart types that have a category axis.

You can format the data table as you like (see Formatting Data Tables [Seite 139]).

Showing and Hiding Data Tables

Use

You can define whether or not you want to integrate the underlying data table in the chart for some chart types.

Prerequisites

You can only display a data table for bar charts, surface charts, line charts, vertical bar charts and tachometers.

Procedure

Showing the Data Table

1. Click with the right mouse key on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *Data Table*.
4. Select the field *Show data table*.
5. If you also want to display the legend keys in the data table, also select the field *Show legend keys*.
6. Choose *OK*.

The data table is displayed below the graphic.

Hiding Legend Keys in the Data Table

1. Click with the right mouse key on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *Data Table*.
4. Deselect the field *Show legend keys*.
5. Choose *OK*.

Hiding the Data Table

1. Click with the right mouse key on any area of the chart.
2. In the context menu, choose *Chart Options*.

   This brings you to the *Chart Options* dialog box.
3. Choose tabstrip *Data Table*.
4. Deselect the field *Show data table*.
5. Choose *OK*.

Formatting Data Tables

Use

You can format the lines of the data table and change the font properties of the table texts. You can also change the number format for the displayed numbers.

Prerequisites

The data table is displayed in the chart, see Showing and Hiding Data Tables [Seite 137].

Procedure

1. Click on the data table with the right mouse key.
2. In the context menu choose *Format Data Table*.

   This brings you to the *Chart Options* dialog box.
3. Make the changes described below and choose OK.

Changing Lines

1. Choose tabstrip *Line*.
2. If you want to copy the default formatting, choose *Automatic*.
3. If you want to set up your own formatting, choose *Custom.* Select the required type and color for the lines.

Changing Font Properties

1. Choose tabstrip *Font*.
2. Select the required font properties for the table texts: font name, style (bold, italic, etc.), the size in points and the color.

Changing the Number Format

1. Choose tabstrip *Number*.
2. In field *Category* choose the required category, e.g. *Date* for date formats.
3. In field *Number formats* choose the required format within the category.
4. If you are not yet satisfied with the format, you can change it directly in field *Number format*.

Changing the Page Layout

Before you printout the draft phase of a chart, you can change the page layout. You can adjust the paper format, page borders and chart scaling for the printout.

Changes to the page layout only affect the draft phase of the printout and not how the chart is published in the Web.

Procedure

1. Click with the right mouse key on any area of the chart.
2. In the context menu choose *Print Preview*.
3. Click again with the right mouse key on any area of the chart.
4. In the context menu choose *Page Setup*.

   The *Setup page* dialog box appears.
5. Make the changes described below and choose OK.

Changing the Paper Format, Orientation and Arrangement

1. Choose tabstrip *Page*.
2. Under *Paper size*, choose the required paper format.
3. Under *Orientation* define if the chart should be printed *Vertical* or *Horizontal*.
4. You can change the position of the chart with *Center*. Normally the chart is output centered horizontal and vertical.
   - To make the chart left-justified, deselect *Horizontally*.
   - To position the chart at the upper edge of the page, deselect *Vertically*.

Changing the Print Quality

1. Choose tabstrip *Page*.
2. With *Print quality* you can define the quality in which the chart should be printed. The larger the number of dpi (dots per inch), the higher the quality and longer the printing.

Changing the Print Numbering

You can decide if you want to output page numbers and define the number with which numbering should begin.

1. Choose tabstrip *Page*.
2. You can change the page numbering with the *First page number* field.
   - If you do not want to number the pages, delete the field.
   - If you want to begin page numbering with a certain number, enter this number.
   - If you want to start page numbering with 1 and to continue numbering automatically, enter *Auto*.

Changing the Page Borders

1. Choose tabstrip *Page Borders*.
2. Under *Border* choose the left, right, top and bottom page borders.

3. Under *Margins* define the distance between the Header and Footer and the top and bottom page borders. If you do not want to use a header or footer, enter 0 in the corresponding field.

Changing the Scaling

1. Choose tabstrip *Options*.
2. To make the pages for the printout larger or smaller, select field *Scale* and enter the desired scaling in percent of the original size. The page is enlarged for a value greater than 100 and is reduced in size for a value under 100.
3. The chart is printed on one or more pages depending on its size. If required, you can also define the number of pages on which the chart should be printed. Select field *Fit to* and enter the desired number of pages. The chart is scaled accordingly and distributed on the given number of pages. If you entered a number greater than 1, you can also decide if the chart should be divided horizontally or vertically.

Printing Charts

Use

You can print a chart from the normal preview window during the draft phase. If you want to check what the chart looks like before printing it, you can first display the print preview. In contrast to the normal preview, the page borders are also displayed in the print preview.

Procedure

Calling the Print Preview

1. Click with the right mouse key on any area of the chart.
2. In the context menu choose *Print Preview*.

   The preview in the *Chart* window is replaced with the print preview. The current page borders are displayed with thin lines. If required, you can change the page layout [Seite 140] and print the chart.

   You can change the page borders directly from the print preview. Place the mouse on one of the border lines and pull the line to the new position. The page border is adjusted when you let go of the mouse key.

Closing the Print Preview

1. Click with the right mouse key on any area of the print preview.
2. In the context menu choose *Close Print Preview*.

Printing Charts

You can print the chart from either the normal preview window or from the print preview.

1. Click with the right mouse key on any area of the chart.
2. In the context menu choose *Print*.
3. To change the page layout click on *Page Setup*. You can also change the paper format, page borders and chart scaling for the printout, see: Changing the Page Layout [Seite 140].
4. To start the printing, click on *OK*.

Dropdown Box

Definition

The Web item *Dropdown Box* allows you to filter characteristic values from a Web application in a dropdown box.

Use

When you select a value, the assigned query view is filtered according to this value. If a different method is used to select a filter value for the characteristic in the dropdown box, the current filter value appears in the dropdown box.

Structure

As well as its general attributes [Seite 38], the *Dropdown Box* Web item also has the following attributes:

Attributes	Description
Index in the filter command (INDEX)	Must have a clear value for all dropdown boxes and radio button groups [Seite 146] within the form tag. This attribute must be changed only if the ONLY_VALUES attribute is active.
Characteristics / Structure (IOBJNM)	**Name of characteristic / structure according to which you want to filter** Specify the technical name of the characteristic (for example, 0COUNTRY) or the structure (25 characters) here. The technical name of the characteristic is stored in the query definition. In the BEx toolbar, choose *Change Query View* → *Change Query (Local View)* or *(Global View)* → . The technical names of the InfoObjects are displayed. Note that the characteristic you have chosen must be included in the query that the Web application is based on.

Read mode (BOOKED_VALUES)	Specifies which values in the master data table are copied to the Checkboxes Web item as filter values: • M: All values from the master data table. Values that do not appear in the Data Provider under the current filter conditions and that produce the result *No suitable data found* upon filtering might also be displayed However, this process might not be the fastest under certain conditions. • D: Values that are basically posted, whereby the current drilldown status is not fully taken into consideration. Q: Only values that are also posted in the Data Provider under the currently valid filter conditions are displayed. It can take a long time under certain circumstances.
Maximum number of values in the dropdown box (MAXVALUES) (optional)	Contains the maximum number of values that are displayed in the dropdown box. If this attribute has the value *0*, all the available values are written in the dropdown box.
Label (SHOW_LABEL) ‘X’ = Yes, ‘ ’ = No	**Use BW description as label** If this attribute is activated, the long text of the characteristic is written as a label in front of the dropdown box. In addition, you can use the context menu related to the description of the characteristic in this label.
Display values only (ONLY_VALUES) ‘X’ = Yes, ‘ ’ = No (optional)	**Create dropdown box only** If you activate this attribute, only the HTML form Web item for the value list is created. You have to create the form, in which the dropdown box is contained, by hand in this case. This attribute is suitable for creating forms [Seite 262] that contain several dropdown boxes.
Do not display entry *All values* **(NO_REMOVE_FILTER)** 'X' = “All values” not offered, ' ' = Display entry “All values”	If this field is not blank, the entry *All values* is not set as a selection option in the radio button group.

Data provider affected **(TARGET_DATA_PROVIDER)**	Contains a list of all data providers to which the filter commands are sent. If you filter according to a characteristic and then activate this attribute, the different data providers for the Web item are notified. For further information about this attribute see General Attributes [Seite 38].

Radio Button Groups

Definition

The *radio button group* Web Item allows you to filter characteristic values in a group of radio buttons.

Use

When you select a value, the assigned query view is filtered according to this value. If you select a filter value in another way for the characteristic of the radio button group, the current filter value is selected.

Structure

As well as its general attributes [Seite 38], the *Radio Button Group* Web item has the following attributes:

Attributes	Description
Characteristics / Structure (IOBJNM)	**Name of the characteristic / structure that you want to filter by** Specify the technical name of the characteristic (for example, 0COUNTRY) or the structure (25 characters) here. The technical name of the characteristic is stored in the query definition. In the BEx toolbar, choose *Change Query View* → *Change Query (Local View)* or *(Global View)* → . The technical names of the InfoObjects are displayed. Note that the characteristic you have chosen must be included in the query that the Web application is based on.

Read mode (BOOKED_VALUES)	Specifies which values in the master data table are copied to the Checkboxes Web item as filter values: • M: All values from the master data table. Values that do not appear in the Data Provider under the current filter conditions and that produce the result *No suitable data found* upon filtering might also be displayed However, this process might not be the fastest under certain conditions. • D: Values that are basically posted, whereby the current drilldown status is not fully taken into consideration. • Q: Only values that are also posted in the Data Provider under the currently valid filter conditions are displayed. It can take a long time under certain circumstances.
Maximum number of displayed values (MAXVALUES) (optional)	Contains the maximum number of values that are displayed in the radio button group. If you set the value to *0*, all the available values in the radio button group are displayed.
Label (SHOW_LABEL) 'X' = Yes, ' ' = No	**Use BW description as label** If this attribute is activated, the long text of the characteristic is written as a label in front of the radio button group. In addition, you can use the context menu related to the description of the characteristic in this label.
Entries next to one another (HORIZONTAL_ALIGNMENT) 'X' = Yes, ' ' = No	If this attribute is activated, the different characteristic values are grouped vertically. If this attribute is deactivated, the characteristic values are grouped horizontally.
Number of entries next to one another/below one another (HORIZONTAL_NUMBER)	Contains the number of entries listed next to one another or below one another, depending on the attribute settings for HORIZONTAL_ALIGNMENT.

Display values only (ONLY_VALUES) ‘X’ = Yes, ‘ ’ = No	**Create radio button group only** If you activate this attribute, only the HTML form Web item for the radio button group is created. Here, you have to create the form, in which the radio button group is contained, by hand. This attribute is suitable for creating forms [Seite 262] that contain several radio button groups.
Do not display entry *All values* (NO_REMOVE_FILTER) 'X' = “All values” not offered, ' ' = Display entry “All values”	If this field is not blank, the entry *All values* is not set as a selection option in the radio button group.
Affected DataProvider (TARGET_DATA_PROVIDER)	List of data providers to which all selection button commands are sent.
Index in the filter command (INDEX) (optional)	Must have a clear value for all dropdown boxes [Seite 143] and radio button groups within the form tag. This attribute must be changed only if the ONLY_VALUES attribute is active.

Checkboxes

Definition

Checkboxes is a Web item that places characteristic values for filtering in a group of checkboxes.

Use

The *Checkboxes* Web item can be used to easily filter a connected saved query view according to a certain characteristic.

You can set or remove filter values in the Web application by setting one or more indicators.

Structure

As well as its general attributes [Seite 38], the *Checkboxes* Web item has the following attributes:

Attribute	Values	Description
Characteristic/structure (IOBJNM)	Selection list	Select the technical name of the characteristic. Characteristics and structures are read from data providers. The characteristic values are provided in a dropdown box in the Web application as filter values.
Read mode (BOOKED_VALUES)	• Master data table (M) • Dimension table (D) • Posted values (Q) Standard setting “Dimension table”	Specifies which values in the master data table are copied to the Checkboxes Web item as filter values: • M: All values from the master data table. Values that do not appear in the Data Provider under the current filter conditions and that produce the result *No suitable data found* upon filtering might also be displayed However, this process might not be the fastest under certain conditions. • D: Values that are basically posted, whereby the current drilldown status is not fully taken into consideration. • Q: Only values that are also posted in the Data Provider under the

		currently valid filter conditions are displayed. It can take a long time under certain circumstances.
Maximum number (MAXVALUES)	Default value: “0”	Maximum number of displayed filter values If "0", all values are displayed.
Maximum length (MAXLENGTH)		Maximum number of characters in the label.
Label (SHOW_LABEL)	‘X’ = Yes, ‘ ’ = No Default setting: ‘X’ = Yes	If this attribute is activated, the long text of the characteristic is written as a label in front of the control box.
Affected DataProvider (TARGET_DATA_PROVIDER)	Selection list	List of data providers to which all checkbox commands are sent.
Entries next to one another (HORIZONTAL_ALIGNMENT)	‘X’ = Yes, ‘ ’ = No Default setting: ‘ ‘ = No	Order entries next to one another If this attribute is activated, the different characteristic values are grouped vertically. If this attribute is deactivated, the characteristic values are grouped horizontally.
Number of entries next to/under one another (HORIZONTAL_NUMBER)	Default value: 1	Contains the number of entries listed next to one another or below one another, depending on the attribute settings for HORIZONTAL_ALIGNMENT.

Generic Navigation Block

Definition

A Web item that obtains data from a query view to create a generic navigation block for a Web application. This block contains keys that you can use to transfer characteristics, for example, into rows or columns.

Use

The Web item *Generic Navigation Block* displays the navigational state of a query view in the Web application in the form of a table. All characteristics and structures in the query view are listed in the table and their filter values are displayed. You can change the navigational status of the query view. You can transfer characteristics and structures to an axis (rows or columns) or from axes. You can filter according to single values and remove the filter again.

Structure

As well as its general attributes [Seite 38], the *Generic Navigation Block* Web item has the following attributes:

Attributes	Description
Read mode **(BOOKED_VALUES)** (BOOKED_VALUES_N) “Master data table” “Dimension table” “Posted values”	Specifies which values in the master data table are copied to the Checkboxes Web item as filter values: • M: All values from the master data table. Values that do not appear in the Data Provider under the current filter conditions and that produce the result *No suitable data found* upon filtering might also be displayed However, this process might not be the fastest under certain conditions. • D: Values that are basically posted, whereby the current drilldown status is not fully taken into consideration. • Q: Only values that are also posted in the Data Provider under the currently valid filter conditions are displayed. It can take a long time under certain circumstances. Read mode for filter items The “master data” read mode may lead to many unposted values being displayed; the “posted values” read mode may be slow.
Order entries next to one another (HORIZONTAL_ALIGNMENT) ‘X’ = Yes, ‘ ’ = No	As well as arranging the characteristics below one another, you can also display them next to one another. In many cases, this makes better use of the display area and there is a stronger visual link between, for example, the table and the navigation block.

Entries next to one another (HORIZONTAL_NUMBER) Default value: 3	Describes the maximum number of characteristics that can be displayed next to one another. If the navigation block contains more than the specified number of characteristics, then it is automatically displayed in more than one row, where the number of characteristics per row is optimized regarding the equal distribution of rows and the required number of characteristics. This attribute is only included when HORITONTAL_ALIGNMENT (Define entries next to one another) is activated.
Maximum filter value length (FILTER_VALUE_LENGTH) Default value: 80	You specify the number of characters, according to which filter value is indicated, by <Number>. If you set the value to 0, then the complete filter value is displayed.
Frame name for input help (TARGET_HELP_FRAME) (optional)	You can display input help in a different frame from the data. If you do not activate this attribute, then input help is displayed in the same window. This parameter is not offered in the Web Application Designer and can only be used for parameterization in the Web template.
List of characteristics with read mode **(IOBJNM_LIST)**	This attribute contains a list of characteristics with read mode. You can select a characteristic of a structure and activate the read mode for it.
Affected DataProviders **(TARGET_DATA_PROVIDER)**	Contains a list of all data providers to which the navigation block is sent. If you filter according to a characteristic and then activate this attribute, the different data providers for the Web item are notified. For further information about this attribute, see General Attributes [Seite 38].

List of navigation block entries (ITEM_NAV_BLOCK_IOBJNM_N) (optional) In the WAD, this attribute is displayed using the *List of Characteristics with Read Mode* attribute (IOBJNM_LIST).	Listing the names of characteristics and structures enables you to determine which entries appear in the navigation block, and in which order. If you do not specify this parameter, all characteristics and structures in the navigation block are displayed.

Attributes that cannot be set in the Web Application Designer:

MODIFY_CLASS	**ABAP class that changes the content of the navigation block** By using the Web design API for tables, you can adjust the cell content individually in the navigation block. See also: Web Design API for Tables [Seite 338]

Hierarchical Context Menu

Definition

Web item that creates a context menu from the hierarchy of a characteristic or structure. The hierarchy nodes appear as context menu entries and can be set as a filter.

Use

You can filter a query view by hierarchy nodes using the hierarchical context menu.

Structure

As well as its general attributes [Seite 38], the Web item *Hierarchical Context Menu* has the following attributes:

Attribute	Values	Description
Reload level dynamically (DYNAMIC)	'X' = Yes, ' ' = No Default setting: 'X' = Yes	Reload from levels underneath the start level. If this attribute is set, the levels below the start level are reloaded dynamically, if required. Otherwise, they are not offered.
Characteristic/structure (IOBJNM)	Selection list	Select the technical name of the characteristic/structure. The hierarchy and structure nodes are read from the Data Provider and can be used as filter values in the context menu.
Hierarchy name (HIERARCHY_NAME)	Selection list	Technical name of the hierarchy which should be used for filtering nodes. If the field is blank, the system uses the hierarchy that is currently set.
Version (HIERARCHY_VERSION)	Selection list	Version of the hierarchy that should be used for filtering nodes. If the field is blank, the current version of the presentation hierarchy is used.
Key Date (DATE)		Key date for which the hierarchy is evaluated. The hierarchy is used as it existed on the given date. If this field is blank, the key date of the query is used.

		You can remove the key date using the *Delete Date* pushbutton.
Drill level (DRILL_LEVEL)	Default value: “3”	Maximum drill level of the context menu (blank= drill level corresponding to query definition)
Affected DataProvider (TARGET_DATA_PROVIDER)		List of DataProviders to which all hierarchy commands are sent.

Filters

Definition

A filter is a Web item that displays the filter values resulting from navigation for a query view in the Web application.

Use

The Web item *Filter* displays the filter values that have been generated by navigating in a query view in a Web application. You also use filters to select individual values.

Structure

As well as its general attributes [Seite 38], the *Filter* Web item has the following attributes:

Attributes	Description
Display Filter Values **PRESENTATION (optional)** **PRESENTATION_N (optional)** 'KEY' = key 'TEXT' = Descriprtion 'KEY_TEXT' = Key and description 'TEXT_KEY' = Description and key	The filter value is displayed in accordance with the setting. If no display is specified for an index, the index 0 display (no index) is used. If this parameter is not specified, the display, which is valid for the characteristic, is used.
List of characteristics **(ITEM_LIST)**	List of characteristics with display
Maximum filter value length (FILTER_VALUE_LENGTH) Default value: 0	You specify the number of characters, according to which a filter value is indicated, by "...". If you keep the value as 0 (default), the complete filter value is displayed.
Only display values **(ONLY_VALUES)** "X" = Yes, " " = No	When you activate this attribute, the filter values are displayed without any labeling, and the formatting is separated using semi-colons.

List characteristics and structures (ITEM_FILTER_IOBJNM_N) (optional) This attribute is displayed in the Web Application Designer in the attribute list of the characteristic (ITEM_LIST).	Listing the names of characteristics and structures enables you to determine which entries appear in the filter and in which order. Only those entries for which a filter value exists are displayed. The remaining entries are skipped over. If you do not specify this parameter, all the characteristics and structures that are filtered are displayed.

If you combine ONLY_VALUES=X and ITEM_FILTER_IOBJNM=MyInfoObject, it is possible to identify a single filter value in the Web template. This is also useful in headers, for example.

Displaying filter values for the characteristic *Calendar year* without formatting

```
<object>
        <param name=’OWNER’ value=’SAP_BW’>
        <param name=’CMD’ value=’GET_ITEM’>
        <param name=’ITEM’ value=’Filter’>
        <param name='ITEM_ID' value='FILTER'>
        <param name='DATA_PROVIDER' value='View1 >
        <param name=’ONLY_VALUES’ value=’X’>
        <param name=’ITEM_FILTER_IOBJNM’ value=’0CALYEAR’>
        ITEM :Filter
</object>
```

Input field for filtering according to *Calendar year* with preassigned dynamic filters (only works with single value filters)

```
<form action="<SAP_BW_URL DATA_PROVIDER='View 1'
FILTER_IOBJNM='0CALYEAR'>" method="post">

Calendar year: <input name="FILTER_VALUE_EXT" size=4 maxlength=4 value="

<object>
        <param name=’OWNER’ value=’SAP_BW’>
        <param name=’CMD’ value=’GET_ITEM’>
        <param name=’ITEM’ value=’Filter’>
        <param name='ITEM_ID' value='FILTER'>
        <param name='DATA_PROVIDER' value='View1 >
        <param name=’ONLY_VALUES’ value=’X’>
        <param name=’ITEM_FILTER_IOBJNM’ value=’0CALYEAR’>
        <param name='PRESENTATION' value='KEY'>
        ITEM :Filter
</object>

<input type=submit value="Submit">
<input type=reset value="Reset">

</form>
```

Label

Definition

The *Label* Web item allows you to display the descriptions of characteristics, attributes, or structural components. You can also create a link to the context menu of these characteristics, attributes, or structural components.

Use

This Web item, together with the Web items Dropdown Box [Seite 143] and Radio Button Group [Seite 146], can be used to configure a comfortable cockpit. You can create navigation blocks by putting different labels for characteristics and structural components into a table.

Structure

As well as its general attributes [Seite 38], the *Label* Web item has the following attributes:

Attribute	Description
Context menu (CONTEXT_MENU) **'X' = Yes, ' ' = No**	If this attribute is activated, a link to the context menu of the characteristic or the structural component is displayed in the description of the characteristic.
Characteristics / Structure (IOBJNM)	**Name of the characteristic/structure** Specify the technical name of the characteristic (for example, 0COUNTRY) or the structure (25 characters) here. The technical name of the characteristic is stored in the query definition. In the BEx toolbar, choose *Change Query View* → *Change Query (Local View)* or *(Global View)* → . The technical names of the characteristics are displayed.
Structural component (STRUCTURE_MEMBER)	Structural component whose text or context menu is displayed.
Attribute name (ATTRINM)	Technical name of the attribute whose header is to be displayed as a label.
Only display values **(ONLY_VALUES)** 'X' = Yes, ' ' = No	**Unformatted display** Only the link to the context menu is generated. If this attribute is activated, only the link to the context menu is displayed. The label is displayed without formatting. You can determine in the Web template how you would like to put the link underneath.

If you would like to add a label for a structural component in your Web application, then you have to enter the technical name of the structure under *InfoObject* and enter the filter value of the structure under *Structural Component* (STRUCTURE_MEMBER). The correct values are determined as follows:

a. Execute a Web application that contains the structural component.

b. Filter according to the structural component in question: Choose *Keep as filter value* in the context menu of the structural component.

c. Copy the parameter value FILTER_IOBJNM from the URL into the clipboard.

d. Choose the attribute in the Web Application Designer and enter the value that was saved in the clipboard.

e. Copy the parameter value FILTER_VALUE from the URL into the clipboard.

f. Choose the attribute *Structural component* from the Web item *Label* in the Web Application Designer and enter the value that was saved in the clipboard.

g. Save your entries.

Text Elements

Definition

Web item that the text items display for a query view in a Web application.

Use

The Web item *Text elements* displays the query information that the query view and the Web application are based on. It is also possible to choose text elements individually.

Structure

The text elements are similar to the text elements in the BEx Analyzer and are made up of the following parts:

- common text elements:
  - technical name of the query (REPTNAME)
  - description of the query (REPTXTLG)
  - InfoProvider (INFOCUBE)
  - key date for the query (SRDATE)
  - accuracy of the data (date and time) (ROLLUPTIME)
  - the person who wrote the query (AUTHOR)
  - the last time the query was changed (date and time) (MODTIME)
  - the last person to make changes to the query (MODUSER)
  - current user (SYUSER)
  - the last time the query was refreshed (date and time) (SYUZEIT)
- variables
- static filter values

As well as its general attributes [Seite 38], the *Text Elements* Web item has the following attributes:

Attributes	Description
Display common text elements (SHOW_COMMON_ELEMENTS) ‘X’ = Yes, ‘ ’ = No	If you activate this attribute, the common text elements are displayed.
Display static filter values (SHOW_FILTERS) ‘X’ = Yes, ‘ ’ = No	If you activate this attribute, the filter values that you determined in the filter area of the query definition are displayed.
Display variable values (SHOW_VARIABLES) ‘X’ = Yes, ‘ ’ = No	If you activate this attribute, the variable values for the query (on which the Web application is based) are displayed.

List of text elements (ELEMENT_NAME_N)	By listing the text element names in combination with their type ELEMENT_TYPE_N, you are able to determine which entries appear as text items and the order in which they appear. With general text elements the name corresponds to one of the values listed above (under *General Text Items*). With variables the name corresponds to the variable name, and with filters the name corresponds to the name of the characteristic. **If you do not specify this parameter, all the filtered characteristics and filtered structures are displayed.**
List of the types of text elements (ELEMENT_TYPE_N) Both attributes, *List of Text Elements* (ELEMENT_NAME_N) and *List of Text Element Types* (ELEMENT_TYPE_N), are addressed in the Web Application Designer in the *Element List* (ITEM_LIST) attribute that lies below.	See above: *List of Text Elements* COMMON = Common text element FILTER = Static filter value VARIABLE = Variable value VARIABLE_KEY = Key for variable value
List of items **(ITEM_LIST)**	This attribute contains a list of text items with type and name. You can choose the type of text item from the list or enter the name of the item manually.
Only display values **(ONLY_VALUES)** ‘X’ = Yes, ‘ ’ = No	If you activate this attribute, the values for the text elements are displayed without any labeling, and the formatting is separated by semi-colons.

The combination of ONLY_VALUES=X, ITEM_TYPE =COMMON, and ITEM_NAME=REPTXTLG, makes it possible to access a text element directly in the Web template, here for example, the query name. The name is used in a title, for example.

Display of validity of data, filter value for cost center and values for 2 variables

```
<object>
    <param name='OWNER' value='SAP_BW'>
    <param name='CMD' value='GET_ITEM'>
    <param name='ITEM' value='Text'>
    <param name='ITEM_CLASS' value='CL_RSR_WWW_TEXT_ELEMENTS'>
    <param name='ELEMENT_TYPE_1' value='COMMON'>
    <param name='ELEMENT_NAME_1' value='ROLLUPTIME'>
```

```
    <param name='ELEMENT_TYPE_2' value='FILTER'>
    <param name='ELEMENT_NAME_2' value='0COSTCENTER'>
    <param name='ELEMENT_TYPE_3' value='VARIABLE'>
    <param name='ELEMENT_NAME_3' value='myFirstVariable'>
    <param name='ELEMENT_TYPE_4' value='VARIABLE'>
    <param name='ELEMENT_NAME_4' value='mySecondVariable'>
    <param name='DATA_PROVIDER' value='MyDataProvider'>

    ITEM :Text

</object>
```

List of Exceptions

Definition

A Web item that lists the available exceptions for a stored query view, along with their status (active/not active) in the Web application.

Use

The *List of Exceptions* Web item displays the status of the exceptions for a stored query view in the Web application, in the form of a table. For each exception, the status of the exception (active/not active) is also displayed. You can activate or deactivate the exceptions by clicking on the symbol.

Structure

The Web item *List of Exceptions* has only general attributes.

See General Attributes [Seite 38]

List of Conditions

Definition

A Web item that displays all the available conditions including their corresponding statuses (active/not active/not applicable/not used) for a stored query view in the Web application.

Use

The *List of Conditions* Web item displays the status of conditions for a stored query view in the Web application, in the form of a table. All the conditions that can be applied to the current navigation status for the query view are listed. With every condition that is displayed, the status of the condition is also displayed (active/not active/not applicable/not used). You use the symbol to activate/deactivate the conditions.

See also:

Using Conditions [Extern] in the BEx Analyzer

Structure

The Web item *List of Conditions* only has general attributes.

See General Attributes [Seite 38]

Alert Monitor

Definition

Reporting Agent [Extern].

Use

With the help of the *Alert Monitor* Web item, you can go to the query views generated in the Exception Reporting [Extern] and Reporting Agent processes and see at a glance any noticeable, deviating key figures from defined threshold values. You can also set filters.

Since there is only one data source for the Alert Monitor, there is no need to set up the *Alert Monitor* Web item as a separate data provider. The *Alert Monitor* Web item generates a suitable data provider for itself and transfers the filter operations to this data provider automatically.

Structure

As well as its general attributes [Seite 38], the *Alert Monitor* Web item has the following attributes:

Attributes	Description
Query (FILTER_QUERY)	You can use this attribute to filter according to entries that come under a specific query. If you do not specify a query, no filter applies.
Display minimal view list (MINIMAL_VIEW) (optional) 'X' = Yes, ' ' = No	When you go to the detail view, only the key figure columns are displayed for which exceptions can arise. If you do not specify the parameter, the key figures are shown as scheduled.
InfoCube (FILTER_INFOCUBE)	You can use this attribute to filter according to entries that come under a specific InfoCube. If you do not specify an InfoCube, no filter applies.
InfoArea (FILTER_INFOAREA)	You can use this attribute to filter according to entries that come under a specific InfoArea. If you do not specify an InfoArea, no filter applies.
Red entries (FILTER_RED) "X" = Yes, " " = No	If you activate this attribute, you see the rows with at least one red entry.
Yellow entries (FILTER_YELLOW) "X" = Yes, " " = No	If you activate this attribute, you see the rows with at least one yellow entry.
Green entries (FILTER_GREEN) "X" = Yes, " " = No	If you activate this attribute, you see the rows with at least one green entry.

Display highest alert level (DISPLAY_MAX_LEVEL) "X" = Yes, " " = No	Instead of displaying red, yellow, and green entries with their frequency for each query view, you can display just the entry with the highest alert level. This may make the display easier to study.
Number of rows in table (BLOCK_SIZE) Default value: 10	Number of rows displayed at once in the table. With the help of this attribute, you can determine the number of entries you want to display at the same time. We recommend that you restrict the number of entries, especially when the number of alerts is high. If you set the value to 0, all entries are displayed. If there are more rows with alerts, an index is added for you to scroll down.
Display as hierarchy (HIERARCHY) "X" = Yes, " " = No	If you activate this attribute, the alerts are displayed in a hierarchy, starting with the level of InfoArea, InfoProvider, and query, and going up to the individual query views. If you deactivate this attribute, the alerts are displayed as a flat list. This means only the query views are displayed (no InfoAreas, InfoProviders, or queries).
Template for display **(TARGET_TEMPLATE_ID)** **(optional)**	Web template, on which the detail view display is based.
List display **(LIST_FOCUS_LEVEL)**	This setting only affects the non-hierarchical display. You can choose between INFOAREA, INFOCUBE, QUERY, VIEW, CELL, and EXCEPTION. Only lines of this type are displayed, according to the selection.
List of columns with labels **(COLUMN_LIST)**	You can structure the columns however you want and display headers for the individual columns. This attribute compounds the attributes COLUMN_NAME and COLUMN_CAPTION.

Display column captions **(DISPLAY_COLUMN_CAPTION)** ‘X’ = Yes, ‘ ’ = No	If you do not activate this attribute, then the column headings are not displayed.
Display toolbar **(DISPLAY_TOOLBAR)**	If this attribute is specified, then the user can use it to control the parameters FILTER_RED, FILTER_YELLOW, FILTER_GREEN, HIERARCHY, and LIST_FOCUS_LEVEL.
Display DataProvider **(DISPLAY_DATA_PROVIDER)** **(optional)** ‘X’ = Yes, ‘ ’ = No	The detail view for an entry can also be displayed in the same Web template. To do this, the logical name of the DataProvider to be used for the display must be specified. The Web items that retrieve your data from this DataProvider display the detail view for the Alert Monitor entry automatically.
Detail frame (TARGET_FRAME)	**Name of the frame for the detail view** If you do not specify a detail frame, the detail view is displayed using pure HTML in the same window and opens a separate window using activated Java Script.

The parameters JUMP_WBID and JUMP_PAGEID used in BW 2.x are still supported. However, we recommend you no longer use these.

Role Menu

Definition

The *Role Menu* Web item displays user favorites and/or roles in a tree.

Use

You can restrict the role menu to user favorites and roles or to a particular role. No menu entries are shown if the user is not assigned to this particular role. You can filter the menu entries according to various categories. A menu entry is a URL in a BEx Web application, for example. You can use the attribute TARGET to define in which window the URL is executed.

Structure

As well as its general attributes [Seite 38], the *Role Menu* Web item has the following attributes:

Attributes	Description
Role name **(ROLE)**	**Restriction to favorites and/or roles or to a particular role.** When ROLE is empty, the user favorites and roles are displayed. The favorites can be displayed with ROLE=SAP_BW_FAVORITES_ (with two _ between SAP_BW and FAVORITES_). Enter the technical name of the role when you want to restrict the display to a particular role.
Number of levels. **(LEVEL)** ‘0’ = all levels	**Number of levels that are initially read.** The role menu is loaded initially with the specified levels. Further levels are read dynamically by expanding folders. All levels are read for LEVEL=0.
Filters **(FILTER)**	**Filter menu entries according to type** You can filter according to the following types or type combinations. • 'U' = URLs • 'P ' = Web templates • ‘Y’ = Queries • 'R ' = Crystal Reports All entries for these types are displayed when a filter is not specified. For example, the filter ‘UP’ shows all URLs and Web templates with reference to ROLE.

Name of the target frame **(TARGET)**	**Name of the frame for executing menu entries.** The URL is executed in the specified frame behind a menu entry.
Scrollbar presentation **(SCROLL_STYLE)** “Auto” = Automatic scrollbar presentation “Yes” = Scrollbar always displayed “No” = Scrollbars never displayed	**Scrollbar presentation** Scrollbars are displayed either dependently on the size of the contents (Auto) or independently of the size, either always (Yes) or never (No).
Display with IFrame **(IFRAME)** ‘X’ = Yes, ‘ ’ = No	**Display as IFrame** You can display the *Role Menu* Web item in an Iframe (a frame imbedded in HTML) or in a Frameset. On the one hand, the combination from other Web items with the *Role Menu* Web item is possible for an IFrame. On the other hand, Netscape 4.7 and PDAs do not support IFrames. Only the *Role Menu* Web item is displayed for the Frameset. The other Web items are ignored. The advantage of IFrames is that they allow you to structure the HTML page for the role menu freely, for example, with text, logos, or other Web items. The role menu in the frame set is created generically and cannot be changed externally. If a role menu is called up with IFrame on Netscape 4.7 or on a PDA, the IFrame is ignored and a frameset is automatically sent to the Web browser.
Display with frames and IFrame **(IFRAME_STYLE)** ‘X’ = Yes, ‘ ’ = No	**Displaying the frame around the IFrame** A frame border is displayed around the IFrame. The proposed value is ‘ ‘ = No.
User and logo display **(DISPLAY_USER)** ‘X’ = Yes, ‘ ’ = No	**User and logo display** Above the role menu, the user name is displayed along with a logo.
Path of the logo icon **(ICON_LOGO)**	**Path of the logo icon** The path of the icon in the MIME repository that is displayed as a logo. You can only use this attribute in the context of DISPLAY_USER. For example: ‘Bex/Icons/s_logo.gif’

Ticker

Definition

The Web item *Ticker* enables you to display the content of a table as a ticker.

Use

To use the ticker, you need a Web browser that enables JavaScript.

Structure

As well as its general attributes [Seite 38], the *Role Menu* Web item has the following attributes:

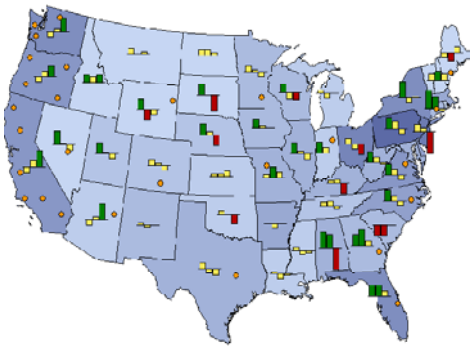
Attributes	Description
Create invisible form **(ONLY_VALUES)** 'X' = Yes, ' ' = No	Create invisible form. You can create an invisible form so that you can further process the ticker text.
Separator **(SEPARATOR)**	Separator between two ticker rows. Separators are added when the data for a new data row is displayed.
Speed in milliseconds. **(SPEED)** Default value: 200	Time in milliseconds until the ticker moves again.
Width of the ticket text in characters **(TICKER_SIZE)** Default value: 60	Width of the ticket text in characters.
Place title at start of ticker text **(USE_CAPTION)** 'X' = Yes, ' ' = No Default setting: 'X' = Yes	Place title at start of ticker text.
Delay in milliseconds **(DELAY)** Default value: 3000	Delay in milliseconds until the ticker starts run.

Maps

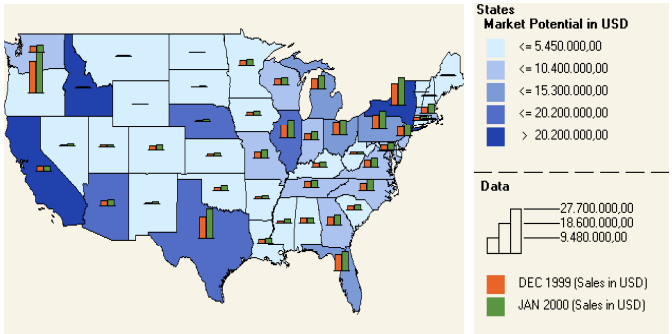
Purpose

Many characteristics in the Business Information Warehouse, for example, customer, sales region, and country, contain important geographical characteristics. The geographical information can be evaluated in a map together with the business-orientated, relevant key figures.

Use maps to visualize business-oriented connections and distributions. You can clearly display specific key figures as color shading, pie charts, or bar charts for a country, a region, or a city.



You have the option to change the view of a map in which you either zoom in to display a detailed view or zoom out for an overall view. In this way, it becomes easier to view, for example, the sales analysis of a specific product that refers to a specific region or a country You can recognize the potential or dangers of a market all at a glance.



Integration

Maps help you with reporting geo-relevant data. By using the *map* Web item, you determine a geographical display in the BEx Web Application Designer for your business-oriented data for the Web application.

Geo-relevant InfoObjects are stored and maintained in the **Metadata Repository**. The master data for geo-InfoObjects is equipped with geo-attributes. Assigning the range of geographic to business-oriented data (mapping/geocoding) using an external tool: ArcView from ESRI (Environmental Systems Research Institute).

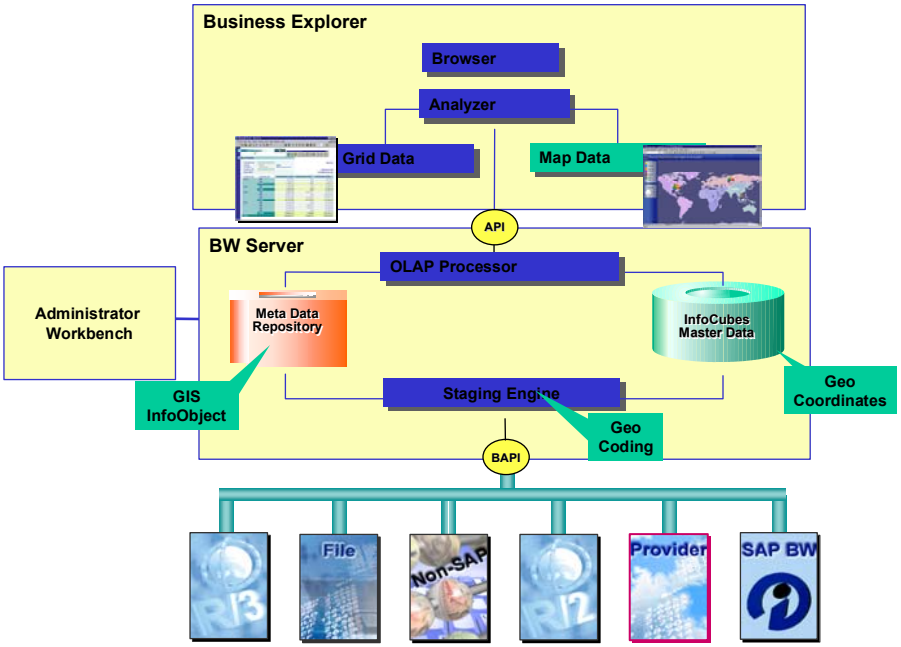
Functions

With maps you prepare and evaluate data of a geographical nature (characteristics such as customer, sales region, and country, for example). The geo-relevant data is displayed graphically on a map. Using enhanced navigation options (“geographical drilldown”), regional information can be evaluated more easily

at different levels of detail. A map shows the spatial proximity of places and regions, allowing geographical connections to be more clearly represented.

Process

The following graphic illustrates the geographic evaluation of data run by the system:



1. In the InfoObject maintenance, flag the geo-relevant characteristics (country, for example) that you want to use as geo-characteristics.
2. You load the corresponding shapefiles [Extern] into the BW system. You maintain the assignment of shape file and master data (mapping between geo-characteristic and shape file). See Maintaining the SAPBWKEY for Static Geo-Characteristics [Extern]

   If you want to use the maps to report on geo-characteristics that show information in point form (customer, plant, sales office, for example) you have to geocode these characteristics. See Geocoding [Extern].
3. In the BEx Web Application Designer you include a map in your Web application and connect these with a data source and a previously-defined query. By using these attributes, you determine the map display and the business-oriented data.

   Finally, you publish the application on the Web. You navigate in the map to report further on the geo-relevant data.

Map Attributes

Definition

The *Map* Web item consists of the objects *Map* and *Map layer.* They are used to display business data geographically.

Use

You use the *Map* object to define a map's basic display.

The *Map Layer* object is used to define the different map layers; map layers are components, with which you construct a map.

Attributes control how a map and its layers are displayed in the Web application.

You can find informationen about layer attributes under Attributes for Map Layers [Seite 178].

The following section looks at attributes for the *Map* object.

Structure

The *map* object has two kinds of attributes, as do all other Web items:

1. General attributes that are fundamental to all display types.

   The general attributes for the *Map* object are the same as the general attributes [Seite 38] for all Web items. The *Map* object also has some additional general attributes. In the Web Application Designer, you can find the general attributes in the *Properties* window, on the *Web item* → *General* tab page.

2. Special attributes which depending on the individual Web item.

   In the Web Application Designer, you can find the special attributes in the *Properties* window, on the *Web item* → *Special* tab page.

General attributes

Attribute	Values	Description
Title (CAPTION)		Title of the map
Generate title (GENERATE_CAPTION)	• 'X' = Yes • ' ' = No Default setting 'X' = Yes	Setting the indicator automatically generates a title for the map as in "SAPBEXTableCaption".
Width in pixels (WIDTH)	Input in pixels Standard setting "300"	Width of the map and legend in pixels
Map height (HEIGHT)	Input in pixels Standard setting "300"	Height of the map in pixels taking geographic relations into consideration
Compute map height automatically (IGNORE_HEIGHT)	• 'X' = Yes • ' ' = No Default setting 'X' = Yes	Ignores the height set manually (map height attribute) and calculates the height automatically using the height/width relationship in the

		underlying map.
(BORDER_STYLE)	• With border • Without border • For form Default setting “No borders”	Type of border drawn around object.
Collapsed (CLOSED)	• ‘X’ = Yes • ‘ ‘ = No Default setting ‘ ‘ = No	Setting the indicator means the map is collapsed when the Web application is opened.
Hide object (HIDDEN)	• ‘X’ = Yes • ‘ ‘ = No Default setting ‘ ‘ = No	If the indicator is set, neither the map nor the title is displayed in the Web application.
Objects with navigation links (GENERATE_LINKS)	• ‘X’ = Yes • ‘ ‘ = No Default setting ‘X’ = Yes	When the indicator is set, a an image map is generated for map which enables navigation within it. At the same time, the corresponding attributes of all the levels belonging to the map are also set to ‘X’ = Yes.

Special attributes

Attribute	**Values**	**Description**
Map layers (LAYERS)		This attribute defines which layers and the number of layers from which your map should be built.
Geo-functions (GEO_FUNCTIONS_POS)	• Do not display • Top • Bottom • Left • Right Default setting: "Do not display"	Position of the geographic function bar in relation to the map.
Legend position (LEGEND_POSITION)	• Left of the map • Right of the map • no legend Default setting "Right of the map"	Position of the legend in relation to the map.
Legend size (LEGEND_SIZE)	Input in pixels Standard setting “150”	Size of the legend in pixels
Visible map area	• Data with associated geography	Specifies which areas of a map are displayed in the Web

(MAP_EXTENT)	• data only • Data and the all available geography Default setting: “Data with associated geography”	application. This depends on the stored data in the application. “Data with associated geography”, the default setting, allows you to display data taking the corresponding geographic context into account.
Map background transparent (CART_COLOR_TRANSPARENT)	• ‘X’ = Yes • ‘ ‘ = No Default setting ‘X’ = Yes	Setting the indicator means that the "Map background color" attribute is ignored and the background appears as transparent in the Web application.
Background color (CART_BACKGROUND_COLOR)	Color value	Background color of the map. The color values are selected in a color selection dialog.
Fill color (no data) (CART_FILL_COLOR)	Color value	Fill color of a region if it is not stored with data. The color values are selected in a color selection dialog.
Map outline color (CART_OUTLINE_COLOR)	Color value	Color of the map outline. The color values are selected in a color selection dialog.
Map outline width (CART_OUTLINE_WIDTH)	Input in pixels Standard setting “1”	Width of the map outline in pixels.

Attributes for Map Layers

Definition

Objects that define the different layers in a map.

Use

The layers of a map contain different geographic and business information. The individual layers are laid over one another in the Web application and, in this way, make up the overall view of the map. You can show or hide individual layers and change the information contained in a map.

For each map layer, you must define how the data is displayed in this layer. Do this by selecting a Map Renderer [Seite 203].

Structure

The *Map Layer* object has two kinds of attributes, as do all other Web items:

1. General attributes that are fundamental to all display types.

   The general attributes for the *Map Layer* object are the same as the general attributes for all Web items. In the Web Application Designer, you can find the general attributes in the *Properties* window, on the *Web item* → *General* tab page.

   See General Attributes [Seite 38]

2. Special attributes that vary according to the selected map renderer.

   Special attributes appear in the Web Application Designer depending on the map renderer, in the *Web item* → *Special* tabpage.

   You can select the map renderer from the selection list of the *Renderer for a Map* on the *Web Item* → *Special* tabpage.

   You can find additional information about the special attributes for the individual map renderer under

   Special Attributes for Color Shading [Seite 180]

   Special Attributes for Bar Charts [Seite 182]

   Special Attributes for Pie Charts [Seite 184]

   Special Attributes for Pie Charts (split) [Seite 186]

   Special Attributes for Dot Densities [Seite 187]

   Special Attributes for Symbol [Seite 189]

   Special Attributes for Symbol (Size-dependent) [Seite 191]

   Special Attributes for Symbol (Color-dependent) [Seite 193]

   Special Attributes for Line [Seite 195]

   Special Attributes for Line (Size-dependent) [Seite 197]

   Special Attributes for Lines (Color-dependent) [Seite 199]

Special Attributes for Color Shading

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

The *color shading* map renderer allows you to display color classes that correspond to special value classes.

Structure

Attribute	Values	Description
Number of classes (CLASSES)		Number of color levels (variable “n”)
Initial color (COLOR_START)	Color value	Defines the color of the symbol that represents the smallest data value in the connected data source. The color values are selected in a color selection dialog.
End color (COLOR_END)	Color value	Defines the color of the symbol that represents the largest data value in the connected data source. The color values are selected in a color selection dialog.
Individual values (CS_DYN)	List	Individual values entry for color and class boundaries.
Color interpolation (COLOR_INTERPOLATION)	RGB (Color value) HSB (color area)	You can determine the color interpolation method here. Colors between the start and the end color are interpolated linearly.
Color (if no data) (COLOR_NONE)	Color value	Defines a color value for filling all the regions of a map that do not have data in the connected data source. The color values are selected in a color selection dialog.
ToolTip for map layer (GENERATE_TOOLTIP)	‘X’ = Yes, ‘ ’ = No Default setting: ‘X’ = Yes	This attribute allows you to display tooltips for the map layer.
Map Layer Label (LABEL)	“No Label” “Text as label”	This attribute allows you to label the map.

	“Key as label” Default setting: “No Label”	
Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.
Map interaction control (IMAGEMAP_PATTERN)	“Normal context menu after clicking on map” “Filtering for data providers after clicking on map”	How the map interaction appears. You can use this attribute to determine which action is to take place when clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the WEB API Reference, section *Web Item → Map → Map Layer.*

Special Attributes for Bar Charts

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

You can display values in the form of bars with the *bar chart* map renderer.

Structure

Attribute	Values	Description
Bar height (BAR_HEIGHT)	Input in pixels Default value: “30”	Defines the maximum height of a bar in the diagram. This height corresponds to the largest value of the connected data source.
Bar width (BAR_WIDTH)	Input in pixels Default value: “10”	Defines the width of the bar in the diagram.
Individual color values (COLOR_VALUE)		Entry for individual color values
ToolTip for map layer (GENERATE_TOOLTIP)	‘X’ = Yes, ‘ ’ = No Default setting: ‘X’ = Yes	This attribute allows you to display tooltips for the map layer.
Map Layer Label (LABEL)	“No Label” “Text as label” “Key as label” Default setting: “No Label”	This attribute allows you to label the map.
Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.
Map interaction control (IMAGEMAP_PATTERN)	“Normal context menu with click on map” “Filtering for data providers with click on map”	How the map interaction appears. You can use this attribute to determine which action is to take place when clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the WEB API Reference, section *Web Item® Map ®Map Layer.*

Special Attributes for Pie Charts

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

You can display values in the form of pie charts with the *pie chart* renderer.

Structure

Attribute	Values	Description
Individual color values (COLOR_VALUE)		Entry for individual color values
Pie diameter (maximum) (PIE_MAX)	Input in pixels	Defines the largest diameter of a circle in the diagram. This diameter is the sum of all the maximum values displayed in the Web application. If you set "circle diameter (minimum) = circle diameter (maximum)“, all the circles in the Web application are displayed with the same diameter.
Pie diameter (minimum) (PIE_MIN)	Input in pixels	Defines the smallest diameter of a circle in the diagram. This diameter is the sum of all the minimum values displayed in the Web application. If you set "circle diameter (minimum) = circle diameter (maximum)“, all the circles in the Web application are displayed with the same diameter.
ToolTip for map layer (GENERATE_TOOLTIP)	‘X’ = Yes, ‘ ’ = No Default setting: ‘X’ = Yes	This attribute allows you to display tooltips for the map layer.
Map Layer Label (LABEL)	“No Label” “Text as label” “Key as label” Default setting: “No Label”	This attribute allows you to label the map.
Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.

Map interaction control (IMAGEMAP_PATTERN)	“Normal context menu with click on map” “Filtering for data providers with click on map”	How the map interaction appears. You can use this attribute to determine which action is to take place when clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the WEB API Reference, section *Web Item® Map ®Map Layer.*

Special Attributes for Pie Charts (split)

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

You can use the *split pie chart* renderer to display values in the form of split pie charts. In a split pie chart, the split occurs automatically if there is a "change of group" (that is from sales for the 1st quarter of 2001 to the sales for the 2nd quarter of 2001).

Structure

The special attributes of the *split pie chart* renderer are identical with the special attributes of the *pie chart* renderer.

See Special Attributes for the Pie Chart Renderer [Seite 184].

Special Attributes for Dot Density

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

You can use the *dot density* renderer to display values in a map using dot densities.

Structure

Attribute	Values	Description
Dot base value (BASE_VALUE)		Describes the basis value for a dot (symbol). Example: When choosing the value 1000 for the BASE_VALUE (“**BASE_VALUE = 1000”**), and the data value for France, say, is 7400, the system produces the result 7400/1000= 7.4 (rounded to 7). 7 dots appear in the France map area, and these dots are distributed randomly.
Color (COLOR)	Color value	Dot color (symbols) The color value is selected via a color selection dialog box.
Maximum density, per cent (DENSITY)	Input in percent	Defines how dense the points should be displayed in a region for the largest value of the connected data source. The attributes "Value for a symbol" and "Maximum density in %" are self-exclusive and may not be used at the same time.
Size/With (SIZE)	Input in pixels	Defines the size of the points (symbols).
Symbol type (STYLE)	“Circle” “Rectangle” “Triangle” “Cross”	Defines the symbol with which the data is displayed in a layer.
ToolTip for map layer (GENERATE_TOOLTIP)	‘X’ = Yes, ‘ ’ = No Default setting: ‘X’ = Yes	This attribute allows you to display tooltips for the map layer.
Map Layer Label	“No Label”	This attribute allows you to

(LABEL)	“Text as label” “Key as label” Default setting: “No Label”	label the map.
Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.
Map interaction control (IMAGEMAP_PATTERN)	“Normal context menu with click on map” “Filtering for data providers with click on map”	How the map interaction appears. You can use this attribute to determine which action is to take place when clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the Web API Reference, section *Web Item→ Map →Map Layer.*

Special Attributes for Symbols

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

You can display values using symbols with the *Symbol* renderer.

Structure

Attribute	Values	Description
Color (VALUE)	Color value	Symbol color as RGB value The color values are selected in a color selection dialog.
Size/With (SIZE)	Input in pixels	Defines the size of the symbols that represent the data.
Symbol type (STYLE)	Circle Rectangle Triangle Cross	Defines the symbol with which the data is displayed in a layer.
ToolTip for map layer (GENERATE_TOOLTIP)	'X' = Yes, ' ' = No Default setting: 'X' = Yes	This attribute allows you to display tooltips for the map layer.
Map Layer Label (LABEL)	"No Label" "Text as label" "Key as label" Default setting: "No Label"	This attribute allows you to label the map.
Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.
Map interaction control (IMAGEMAP_PATTERN)	"Normal context menu with click on map" "Filtering for data providers with click on map"	How the map interaction appears. You can use this attribute to determine which action is to take place when clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the Web API Reference,

		section *Web Item→ Map →Map Layer.*

Special Attributes for Symbol (Size-dependent)

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

You can use the *symbol (size-dependent)* renderer to display values using size-dependent symbols. The renderer takes the location and data values for this location into consideration. The size of the symbols depends on the data.

Structure

Attribute	Values	Description
Number of classes (CLASSES)		Number of size levels (variable “n”)
Color (COLOR)	Color value	Symbol color The color values are selected in a color selection dialog.
Individual values (SG_SYM_DYN)	List	Individual values entry for symbol sizes and class boundaries.
Symbol (end size)/ Line (end width) (SIZE_END)	Input in pixels	Defines the symbol size / line width that represents the largest data value in the connected data source.
Symbol (starting size) / Line (starting width) (SIZE_START)	Input in pixels	Defines the symbol size / line width that represents the smallest data value in the connected data source.
Symbol type (Style)	“Circle” “Rectangle” “Triangle” “Cross”	Defines the symbol with which the data is displayed in a layer.
ToolTip for map layer (GENERATE_TOOLTIP)	‘X’ = Yes, ‘ ’ = No Default setting: ‘X’ = Yes	This attribute allows you to display tooltips for the map layer.
Map Layer Label (LABEL)	“No Label” “Text as label” “Key as label” Default setting: “No Label”	This attribute allows you to label the map.

Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.
Map interaction control (IMAGEMAP_PATTERN)	“Normal context menu with click on map” “Filtering for data providers with click on map”	How the map interaction appears. You can use this attribute to determine which action is to take place when clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the WEB API Reference, section *Web Item→ Map →Map Layer.*

Special Attributes for Symbol (Color-dependent)

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

You can display values using color-dependent symbols with the *Symbol (color-dependent)* renderer. The renderer takes the location and data values for this location into consideration. The color of the symbols depends on the data.

Structure

Attribute	Values	Description
Individual values (CG_SYM_DYN)		Individual values entry for color values and class boundaries.
Number of classes (CLASSES)		Number of color levels (variable “n”)
End color (COLOR_END)	Color value	Defines the color of the symbol that represents the largest data value in the connected data source. The color values are selected in a color selection dialog.
Color interpolation (COLOR_INTERPOLATION)	RGB HSB	Color interpolation method Defines the method with which the color values that lie between the starting and end colors are interpolated. These color values represent the data that lies between the smallest and largest values of the data source.
Initial color (COLOR_START)	Color value	Defines the color of the symbol that represents the smallest data value in the connected data source. The color values are selected in a color selection dialog.
Size/With (SIZE)	Input in pixels	Defines the size of the symbols that represent the data.
Symbol type (STYLE)	Circle Rectangle Triangle	Describes how a symbol is displayed.

	Cross	
ToolTip for map layer (GENERATE_TOOLTIP)	‘X’ = Yes, ‘ ’ = No Default setting: ‘X’ = Yes	This attribute allows you to display tooltips for the map layer.
Map Layer Label (LABEL)	“No Label” “Text as label” “Key as label” Default setting: “No Label”	This attribute allows you to label the map.
Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.
Map interaction control (IMAGEMAP_PATTERN)	“Normal context menu with click on map” “Filtering for data providers with click on map”	How the map interaction appears. You can use this attribute to determine which action is to take place when clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the Web API Reference, section *Web Item→ Map →Map Layer.*

Special Attributes for Line

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

The **Line** renderer displays values with a line going from a starting to an end point.

Structure

Attribute	Values	Description
Color (COLOR)	Color value	Line color. The color values are selected in a color selection dialog.
Layer (starting points) (FROM_LAYER)		Layer for starting points Defines the layer on which the line's starting points lie. All starting points must lie on one layer.
Line type (LINE_STYLE)	"Continuous" "Dotted" "Dashed"	Defines how the lines are displayed.
Size/With (SIZE)	Input in pixels	Defines the width of the line.
Layer (end points) (TO_LAYER)		Layer for end points Defines the layer on which the end points of the lines lie. All end points must lie on one layer.
ToolTip for map layer (GENERATE_TOOLTIP)	'X' = Yes, ' ' = No Default setting: 'X' = Yes	This attribute allows you to display tooltips for the map layer.
Map Layer Label (LABEL)	"No Label" "Text as label" "Key as label" Default setting: "No Label"	This attribute allows you to label the map.
Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.

)		
Map interaction control (IMAGEMAP_PATTERN)	“Normal context menu after clicking on map” “Filter data providers after clicking on map”	How the map interaction appears. You can use this attribute to determine which action is to take place when clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the WEB API Reference, section *Web Item→ Map →Map Layer.*

Special Attributes for Line (Size-dependent)

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

You can use the bar chart map renderer to display values in the form of bars.

Structure

Attribute	Values	Description
Number of classes (CLASSES)		Number of size levels (variable “n”)
Color (COLOR)	Color value	Line color. The color values are selected in a color selection dialog.
Line type (LINE_STYLE)	“Continuous” “Dotted” “Dashed”	Defines how the lines are displayed.
Individual values (SG_LI_DYN)		Entry of individual values for line width and class boundary.
Symbol (end width) / line (end width) (SIZE_END)		Symbol/line end width
Symbol (start width) / line (start width)		Symbol/Line start width
ToolTip for map layer (GENERATE_TOOLTIP)	‘X’ = Yes, ‘ ’ = No Default setting: ‘X’ = Yes	This attribute allows you to display tooltips for the map layer.
Map Layer Label (LABEL)	“No Label” “Text as label” “Key as label” Default setting: “No Label”	This attribute allows you to label the map.
Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.
Map interaction control (IMAGEMAP_PATTERN)	“Normal context menu with click on map” “Filtering for data providers with click on map”	How the map interaction appears. You can use this attribute to determine which action is to take place when

	with click on map”	clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the WEB API Reference, section *Web Item→ Map →Map Layer.*

Special Attributes for Lines (Color-dependent)

Definition

A map renderer, with which you determine how BW data is displayed in a map layer.

Use

The *line (color-dependent)* renderer displays values with a line from the starting to the end point. The data values define the color of a line.

Structure

Attribute	Values	Description
Individual values (CG_LI_DYN)		Individual values entry for color values and class boundaries.
Number of classes (CLASSES)		Number of color levels (variable “n”)
End color (COLOR_END)	Color value	Defines the color of the symbol that represents the largest data value in the connected data source. The color values are selected in a color selection dialog.
Color interpolation	RGB HSB	Defines the method with which the color values that lie between the starting and end colors are interpolated. These color values represent the data that lies between the smallest and largest values of the data source.
Initial color (COLOR_START)	Color value	Defines the color of the symbol that represents the smallest data value in the connected data source. The color values are selected in a color selection dialog.
Line type (LINE_STYLE)	“Continuous” “Dotted” “Dashed”	Defines how the lines are displayed.
Size/With (SIZE)	Input in pixels	Defines the width of the line.
ToolTip for map layer (GENERATE_TOOLTIP)	‘X’ = Yes, ‘ ’ = No Default setting: ‘X’ = Yes	This attribute allows you to display tooltips for the map layer.

Map Layer Label (LABEL)	“No Label” “Text as label” “Key as label” Default setting: “No Label”	This attribute allows you to label the map.
Affected DataProvider (TARGET_DATA_PROVIDER)	List	List of data providers to which all commands of the map layer are sent.
Map interaction control (IMAGEMAP_PATTERN)	“Normal context menu with click on map” “Filtering for data providers with click on map”	How the map interaction appears. You can use this attribute to determine which action is to take place when clicking on the map, as an alternative to the context menu. You can find additional information about this attribute in the WEB API Reference, section *Web Item® Map ®Map Layer.*

Array Attributes

Use

Some map attributes are the so-called array attributes. You can recognize these attributes by the suffix “(n)“ (see to Map Attributes [Extern]).

This section describes the function of array attributes.

The following are array attributes:

- Symbol size (n)
- Class boundary (n)
- Color value (n)
- Line width (n)
- Bar color (n)
- Segment color (n)

The variable n is the number of classes. You can set this variable with the attribute class number

Example

Use the above attributes to change the default settings in the system. The default settings provide a linear calculation of the interim values for each class.

For example: symbol size (n)

If the attribute symbol size (n) is not set, the size of the symbols displayed in a map, starting with starting value A and ending with end value B, are distributed linearly across the number of classes. If you have for example 4 classes, a starting size of 8 and an end size of 20 points, you would get the following values for the individual class sizes:

- Class 1 -8 points
- Class 2 -12 points
- Class 3 -16 points
- Class 4 -20 points

You can adjust this automatic assignment by manually setting the values for the attribute symbol size (n), for example, in the following way:

- Class 1 -8 points
- Class 2 -10 points
- Class 3 -12 points
- Class 4 -20 points

The attributes symbol size (n), color value (n) and line width (n) are always bound to the attribute class boundary (n). That is, when you set one of these attributes, you also need to set a value for the corresponding class boundary.

For further information about the use of these objects, go to the SAP Service Marketplace on the BW pages under *Documentation* → *Documentation Enhancements* → ***Web API Reference*** in the section *Web Items* → *Maps.*

Map Renderer

Definition

With a map renderer, you determine how BW data is displayed on a map layer.

Structure

There are 11 different map renderers in the BEx Web Application Designer. These renderers are divided into three different classes:

Class 1: Renderers that relate to polygonal areas (static geo-characteristics). They display the following:

- Color shading (COLORSHADING or CS)
- Bar charts (BAR)
- Pie charts (PIE)
- Pie charts (divided) (SPLITPIE)
- Pixel density (DOTDENSITY or D_DENSITY)

  For these renderers, the static geo-characteristic must appear in the related *data provider* in the rows and the values to be displayed in the renderer must be in the columns. You can use hierarchies in both cases. You cannot have any other characteristic other than the geo-characteristic, or any key figure in the rows. You can use several characteristics or key figures in the columns.

Class 2: Renderers that relate to locations (dynamic geo-characteristics). They display the following:

- Symbol (SYMBOL)
- Symbol (size-dependent) (SIZEGRADUATEDSYMBOL or SG_SYMBOL)
- Symbol (color-dependent) (COLORGRADUATEDSYMBOL or CG_SYMBOL)
- Bar charts (BAR)
- Pie charts (PIE)
- Pie charts (divided) (SPLITPIE)

  For these renderers the dynamic geo-characteristic must appear in the *data provider* belonging to it in the rows. You must have also selected the *Longitude* and *Latitude* display attributes to be displayed. You cannot have any other characteristics or key figures in the rows. Only the first column is considered by the symbol renderers. The renderers **bar chart**, **pie chart** and **pie chart (divided)** consider all columns.

Class 3: Renderers that display relationships between locations (dynamic geo-characteristics):

- Line (LINE)
- Line (size-dependent) (SIZEGRADUATEDLINE or SG_LINE)
- Line (color-dependent) (COLORGRADUATEDLINE or CG_LINE)

  It is important to have at least three map layers for these renderers. You define *Start Point* in one map layer and the *End Point* in another map layer. The prerequisites described in class 2 are also valid for both of these map layers. The third map layer contains the relationship between the dynamic geo-characteristics *Start Point* and *End Point*, that is, both characteristics must be in the rows. The same prerequisites are valid for the columns as described in class 2.

For those map renderers that have a long technical name, you can specify a shorter, alternative name (for example, COLORGRADUATEDLINE or CG_LINE). Both variations are supported.

Integration

So that you can present the BW business data on individual map layers graphically, you have to assign a **map renderer** to each map layer in the **BEx Web Application Designer** and determine the properties for this renderer.

Example of a Renderer in Class 3

Map layer query view that describes the relationship

Sales Office	Sales Representative	Sales
A	1	100 $
A	2	150 $
A	3	120 $
B	11	90 $
B	12	80 $

Map layer query view that describes the start point

Sales Office	Longitude	Latitude	# Employees
A	2.3	3.4	120
A	2.3	3.4	15
A	2.3	3.4	120
B	-3.5	-2.0	87
B	-3.5	-2.0	80

Map layer query view that describes the end point

Sales Representative	Longitude	Latitude	# Customers
1	2.8	4.7	12
2	2.6	5.7	11
3	2.4	6.7	13
11	-3.8	-1.2	23
12	-3.4	-1.8	21

Single Document

Definition

Web item allowing you to display single documents that you created in the Administrator Workbench or in master data maintenance for master data in the Web application.

Use

You can create the documents in different formats and versions (see Documents [Extern]). For example you can add several documents such as route directions and a picture of the local office for each value of a characteristic, such as *Business partner*. You can use the document type attribute to decide which document you want to display in the Web application.

Structure

As well as its general attributes [Seite 38], the Web item *Single document* has the following attributes:

Attributes	Description
Characteristics (IOBJNM)	Name of the characteristic which the Web item *Single document* should reference. Give the technical name of the characteristic here (25 character string).
Document type (WWW_DOC_TYPE)	If you created several documents for a characteristic in the Administrator Workbench or in the master data maintenance screen, the different document types that reference the characteristic are displayed here for selection. If you do not make an entry here, the system assumes that there is a document for the selected characteristic. If this is not the case you get a message – that no document was found or – that the document is not unique (there is more than one)
Default picture (DEFAULT_PICTURE_URL)	Absolute or relative URL for a picture. This picture is displayed in a Web item if no document has been found, or if the document is not consistent. Pictures from the MIME Repository can be selected here using a relative address.

Document display style (IS_INPLACE) ‘X’ = Yes, ‘ ’ = No	You can define if the single document is displayed • in the Web application (“X”) • in a separate window (" ") with this attribute. Inplace ("X") is especially suitable for screens and short texts.
Links to document display (LINK_TO_BROWSER) ‘X’ = Yes, ‘ ’ = No	You can use this attribute to determine whether you can link from the document to the general document display. If the value is set to X, clicking on the picture displays all documents for the currently filtered characteristic value (or all documents for the characteristic master data, if no value is in the filter) in a separate window.

List of Documents

Definition

Web item that displays a list of documents in the Web application. You can also create new documents [Extern] yourself in the Web application.

Use

The Web item *List of Documents* enables you to call or create context-sensitive information about the transaction data used in the Web application. If you navigate in the Web application and, for example, restrict a characteristic to a certain characteristic value, the list of documents is automatically adjusted. This means that only the documents that are relevant for the restricted navigation status appear.

The documents for the characteristics that were set as the *Document Properties* in the Administrator Workbench appear automatically in the list.

Structure

The Web item *List of Documents* has the following structure:

- **Context**

  The context is the counterpart to the navigation block and shows the characteristics that are *Document Properties* and are contained in the basic data provider (query or query view), and their values.

  If you have already inserted a navigation block into your Web template, you do not need the context information in the list of documents if you want to see only those documents that refer to the numbers of the table.

  The context is adjusted dynamically depending on the navigation in the Web application. This means that the list of documents displays only those documents that refer to the requested data in the table. If the context can be changed, you can also focus on the documents and, for example, display all the documents that refer to the InfoProvider.

  You can set the following in the Web Application Designer using attributes:

  – Whether or not you want to display the context

  – Whether or not you can change the context in the Web report

- **Further Functions**

  You can also:

  – Create a new document [Extern]

  – Set whether or not the characteristics of the documents are to be displayed

  – Choose all the selections. In the context, all the characteristics for which you can restrict the list of documents or a new document are displayed.

- **List of Documents**

  The links to the documents are listed here in alphabetical order.

In addition to its general attributes [Seite 38], the *List of Documents* Web item has the following attributes:

Attributes	Description
Display Properties **(SHOW_PROPERTIES)** ‘X’ = Yes, ‘ ’ = No	This attribute indicates if the document property is to be displayed. The document properties tell you about how the documents are assigned, for example base planning object 4711, month of May. The context to which the document was restricted determines the assignment. If a document property is identical for all selected documents, this property is not displayed under the document link. You define the initial display with the *Document Properties* attribute. Using *Further Functions,* you can toggle the display of the properties in the Web application. Furthermore, in the PROPERTY_LIST attribute you can set which additional document properties need to be displayed here.
Context Information **(SHOW_CONTEXT)** 'X' = is changeable 'N' = is not changeable, but is displayed ' ' = is not displayed	With this attribute you can indicate whether the context, meaning the selection conditions for the documents for the *List of Documents* Web item, is displayed, as well as whether these selection conditions are changeable.
Number of Rows in the Table **(BLOCK_SIZE)**	With this attribute you can define the number of rows (document links and properties) that are displayed at one time. If there are not enough rows, an index for scrolling appears in the bottom row.
Maximum Number of Displayed Values **(MAXVALUES)**	With this attribute you can define the maximum number of characteristic values to be displayed in the dropdown box of the context.
Document Changeable **(DOCUMENTS_ARE_CHANGEABLE)** ‘X’ = Yes, ‘ ’ = No	With this attribute you can define whether documents can be created, changed, or deleted.

Frame for Display **(TARGET_FRAME)**	Here, you can specify an HTML frame in which the individual documents that you call from the list of documents is displayed. The HTML frame must be integrated in the Web template. If you use the Web template within a frame set, you can also integrate the *List of Documents* Web item in another frame of this set. If you do not define an HTML frame, the individual documents are displayed in separate windows.
Additional Properties **(PROPERTY_LIST)**	Additional document properties that are displayed for each document displayed in the Web item. Here, you can set the following properties: LAST_CHANGED_BY: Last person to make changes LAST_CHANGED_AT: Change time CREATED_BY: Creator CREATED_AT: Creation time CHECKOUT_USER: Editor LANGUAGE: Language

Ad-hoc Query Designer

Definition

A Web item that enables you to create and change queries in a Web application on an ad-hoc basis.

Use

You can use the *Ad-hoc Query Designer* Web item in the Web Application Designer to structure Web applications in which you create or change queries. The Web item is as a tool for designing ad-hoc queries in a Web environment.

In particular it enables you to:

- Create queries by assigning characteristics from an InfoProvider to rows, columns, filters, and free characteristics, and including key figures from the InfoProvider in the key figure structure of the query.
- Restrict or filter key figures and characteristics
- Use predefined key figure structures and restricted or calculated key figures in the query
- Set or change query properties and key figure/characteristic properties in the query
- Create or change conditions and exceptions

When compared with the BEx Query Designer [Extern], the *Ad-hoc Query Designer* Web item has the following restrictions when creating or changing queries:

- You cannot integrate variables into the query directly.

  However, you can use variables in reusable structures, or restricted or calculate key figures, which are used in the Ad-hoc Query Designer

- The query can contain only **one structure**. This structure has to be the key figure structure and be in the rows or columns of the query.
  - You cannot use key figures or key figure structures in the filter.
  - You cannot define exception cells, since this requires two structures.

    You cannot **create** reusable structures or restricted or calculated key figures in the *Ad-hoc Query Designer* Web item.

    You can edit existing queries in the *Ad-hoc Query Designer* Web item, if the queries adhere to the restrictions laid out above The *Ad-hoc Query Designer* checks these requirements when loading a query. If the query is too complex, the query can be loaded into the *Ad-hoc Query Designer* but you cannot change it there. You then receive the appropriate message. You can still check and execute the query.

Structure

As well as its generic attributes [Seite 38], the *Ad-hoc Query Designer* Web item has the following attributes:

Attributes	Description

InfoProvider Name (INFOCUBE)	Technical name of the InfoProvider used to start the *Ad-hoc Query Designer*. Double-click on the empty value cell next to the attribute *InfoProvider Name*. The *BEx Open* dialog box appears. Select the InfoProvider that you want to use from your history or from the complete list under *InfoAreas.*
Name of Query (QUERY)	Technical name of the query used to start the *Ad-hoc Query Designer*. Double-click on the empty value cell next to the attribute *Name of Query*. The *BEx Open* dialog box appears. Select the query from your history, favorites or roles of from the complete list under *InfoAreas*.
Template for Output (TARGET_TEMPLATE_ID) optional	Name of the Web template used to display the query result. Double-click on the empty value cell next to the attribute *Template for Output.* The *BEx Open* dialog box appears. Select the Web template from your history, favorites, roles, or the list of workbooks. If you do not specify a Web template, the default Web template is used.
Frame for Query Output (TARGET_FRAME) optional	Frame in which the query is displayed when executed. If you specify a frame, the query output is controlled within this frame. Otherwise the query is displayed in a new browser window. Prerequisites for specifying a frame: You have created a frameset in an external HTML editor or manually (in Notepad).

Action on Execution **(ON_EXECUTE)**	You can use this attribute to determine what happens to the *Ad-hoc Query Designer* Web item in the Web Application after clicking on the *Execute* pushbutton in the Ad-hoc Query Designer. The following options are available: • **No change to the item** The query is executed. No change is made to the *Ad-hoc Query Designer* Web item. • **Item is hidden** The Ad-hoc Query Designer disappears when executing the query. If you want to open the Ad-hoc Query Designer again, while using the standard Web template, click on in the symbol toolbar. If you are using a different Web template, you need to install the option of calling up the Ad-hoc Query Designer again manually in the Web template. • **Item is compressed** The Ad-hoc Query Designer is compressed when executing the query. You now see the Web item with a compressed arrow and title. If you want to open the Ad-hoc Query Designer again, use the arrow to open it.

Action on closing **(ON_CLOSE)**	You can use this attribute to determine what happens to the *Ad-hoc Query Designer* Web item in the Web Application after clicking on the *Close* pushbutton in the Ad-hoc Query Designer. The following options are available: • **No change to the item** After closing, the query is closed in the ad-hoc query designer. The individual fields (rows, columns, filter, free characteristics) are now empty. There is no change to the Web item itself. • **Item is hidden** The Ad-hoc Query Designer disappears when closing. If you want to open it again in the standard Web template, click on in the symbol toolbar. If you are using a different Web template, you need to install the option of calling up the Ad-hoc Query Designer again manually in the Web template. • **Item is compressed** The Ad-hoc Query Designer is compressed when closing. You now see the Web item with a compressed arrow and title. If you want to open the Ad-hoc Query Designer again, use the arrow to open it.
Display Data Provider (DISPLAY_DATA_PROVIDER) optional	Data provider through which you want to display the query in the current Web template after you have executed it. Specify the name of the DataProvider with which you want to display the query in the Web template. By double-clicking on an empty value cell next to the *Data Provider Display* attribute, a dropdown box containing a list of the data providers available appears. If you specify DISPLAY_DATA_PROVIDER but not TARGET_FRAME or TARGET_TEMPLATE_ID, when you execute the query the display data provider specified is replaced in the current Web template.

If you do not specify the optional attributes DISPLAY_DATA_PROVIDER, TARGET_FRAME and TARGET_TEMPLATE_ID, the query results are displayed in a new browser window in the default Web template.

Integration

You can work with all queries in the BEx Query Designer, regardless of the tool they were created with.

What If Prediction

Definition

The *What If Prediction* web item enables you to perform online prediction for a single customer record on models defined under services such as *Decision Tree, Scoring* and *Clustering.*

Use

The prediction for prospective customer behavior is based on specific attributes of that customer. For example, when a customer applies for a loan, you can predict if the customer is creditworthy or not, based on certain attributes such as income, profession or transaction history.

Structure

The *What If Prediction* web item has the following specific attributes:

Attributes	Description

MODEL_NAME (optional)	**Name of the mining model** The name of the model that would be used to perform the prediction. If you do not enter a model name, a drop down box containing the names of all the models that are ready for prediction in the selected service would appear in the web item. If you specify a model name, but do not specify the corresponding service name to which it belongs, an error will be generated.
SERVICE_NAME (optional)	**Name of the service** The name of the service for the web item. If you do not enter the service name, you can choose the service from a drop down box containing the list of services that support What If Prediction. If you specify the service name and the model name, then the web item will be for that particular service and model only. If you specify the service name but do not specify the model name, then the web item will be published for that service. You can choose the name of the model from the drop down box.
DISPLAY_MODEL "X" = Yes, " " = No	**Display Model Name** Specifies whether the model name should be displayed in the web item. This option is relevant only if you have specified the model name. Otherwise, it will not have any effect.
DISPLAY_SERVICE "X" = Yes, " " = No	**Display Service Name** Specifies whether the service name should be displayed in the web item. This option is relevant only if you have specified the service name.
DISPLAY_CHART_OPT "X" = Yes, " " = No	**Display Chart Customize** Specifies whether the option to customize the what if prediction analysis chart must be displayed or not.

ABC Classification

Definition

The *ABC Classification* web item allows you to classify objects (Customers, Products or Employees) based on a particular measure (Revenue or Profit) using certain classification rules.

Structure

The *ABC Classification* web item has the following specific attributes:

Attributes	Description
ABC_NAME (optional)	**Name of the ABC Classification** The name of the ABC Classification model that would be used. If you do not enter a model name, a drop down box containing the names of all the models that are ready for prediction in the selected service would appear in the web item.
SHOW_ABC_CLASSIFICATION "X" = Yes, " " = No	**Show ABC Classification** Specifies whether the drop down box for selecting ABC Classification should be displayed in the web item. This option is relevant only if you have specified the ABC Classification. Otherwise, it will not have any effect.
SHOW_STAT "X" = Yes, " " = No	**Display Statistics** Specifies whether statistical information about the selected ABC Classification should be displayed in the web item.
SHOW_CHART "X" = Yes, " " = No	**Display ABC Classification Chart** Specifies whether the selected ABC Classification should be displayed as chart in the web item.
SHOW_MODEL "X" = Yes, " " = No	**Display Model Name** Specifies whether meta data (which Info Object is classified by which key figure from which Query) about the selected ABC Classification should be displayed in the web item.

BW Stylesheets

Definition

Cascading stylesheets that are stored in the MIME repository under the name *BWReports.css*.

Use

Cascading stylesheets add to the basic functions of HTML by enabling you to determine different formats. You use CSS classes in HTML (which is created by the BEx Web items). The styles are identified in the generated HTML using class attributes according to the HTML standard.

You can change the styles and thereby influence how the BW contents are displayed.

Note that a stylesheet always has to be included in a Web template.

Structure

The following classes are identified when HTML is generated:

CSS classes	Use
Container for Web items	
SAPBEXBorderFlexBoxTtl	Title area for Web items with borders
SAPBEXBorderlessFlexBoxTtl	Title area for Web items without borders and those with form characters
SAPBEXBorderFlexBox	Web items with borders
SAPBEXBorderlessFlexBox	Web items without borders and those with form characters
SAPBEXFlexBoxStdBg	Background
SAPBEXFlexBoxFormBg	Background for Web items with form characters
Group Boxes	
SAPBEXGrpTtl	Title
SAPBEXGrpBdy	Background
Table	
SAPBEXstdData	Numerical value in the data cells
SAPBEXstdDataOdd	Even, alternate rows
SAPBEXaggData	Aggregated numerical values in data totals cells
SAPBEXstdDataEmph	Emphasized numerical values in data cells
SAPBEXstdDataEmphOdd	Even, alternate rows with emphasized numerical values
SAPBEXaggDataEmph	Aggregated emphasized numerical values in data totals cells
SAPBEXstdItem	Structure component, characteristic value, attribute
SAPBEXKeyAttr	Numerical attribute
SAPBEXaggItem	Aggregated structure component, characteristic value sum

	total, attribute sum total
SAPBEXchaText	Caption for characteristics and attributes
SAPBEXformats	Formatting cell (scaling factors)
SAPBEXexcGood1	Exception with priority good 1
SAPBEXexcGood2	Exception with priority good 2
SAPBEXexcGood3	Exception with priority good 3
SAPBEXexcCritical4	Exception with priority critical 4
SAPBEXexcCritical5	Exception with priority critical 5
SAPBEXexcCritical6	Exception with priority critical 6
SAPBEXexcBad7	Exception with priority bad 7
SAPBEXexcBad8	Exception with priority bad 8
SAPBEXexcBad9	Exception with priority bad 9
SAPBEXundefined	Numerical value cannot be defined, or is invalid, such as division by zero
SAPBEXTableGrid	Color of grid lines
SAPBEXCellspacing	Grid lines on/off
Navigation Block, Filter	
SAPBEXNavigatorChaTxt	Description of characteristics
SAPBEXNavItem	Characteristic values in navigation block and filter
Alert Monitor	
SAPBEXAlertItem	Represented as a list
SAPBEXAlertToolbar	Toolbar
SAPBEXAlertHead	Title
SAPBEXAlertLevel0	Hierarchy level 0
SAPBEXAlertLevel1	Hierarchy level 1
SAPBEXAlertLevel2	Hierarchy level 2
SAPBEXPageDspl	Index for displaying values on several pages
Text Elements	
SAPBEXTElemName	Text element name
SAPBEXTElemVal	Text element value
Exceptions	
SAPBEXExcName	Description of exception
SAPBEXExcStatus	Status of exception (active/inactive)
Conditions	
SAPBEXConName	Description of condition
SAPBEXConStatus	Status of exception (active/inactive)

Legend	
SAPBEXMapLgdHeading1	Title
SAPBEXMapLgdHeading2	Area title
SAPBEXMapLgdLine	Values for color legend
SAPBEXMapLgdBorder	Formatting of color legend
SAPBEXMapLgdMinmax	Minimum or maximum
SAPBEXMapLgdLegend	Values for symbol legend
Context Menu	
SAPBEXCtxtMenuItem	Entries in the context menu
SAPBEXCtxtMenuHeader	Entry selected from the context menu
Calendar	
SAPBEXCalBg	Background
SAPBEXCalBorder	Border
SAPBEXCalLink	Left
SAPBEXCalSkipMonth	Leaves in the monthly and yearly display
SAPBEXCalCurrentDate	Monthly and yearly display
SAPBEXCalWeekday	Name of week day (Mon, Tues,...)
SAPBEXCalDay	Number of the day (1,...)
SAPBEXCalDaySelectedNormal	Selected day
SAPBEXCalDaySat	Saturday
SAPBEXCalDaySelectedSat	Selected Saturday
SAPBEXCalDaySun	Sunday
SAPBEXCalDaySelectedSun	Selected Sunday
SAPBEXCalNoDay	Week day without day number
SAPBEXCalWeek	Calendar week
SAPBEXCalMonth	Month in high-speed navigation
SAPBEXCalCurrentMonth	Selected month in high-speed navigation
Dialogs	
SAPBEXDialogBorder	Border
SAPBEXDialogBg	Background
SAPBEXDialogTtl	Title
SAPBEXDialogAreaTtl	Area title
SAPBEXDialogOffset	Horizontal and vertical spacing in dialogs
Menu	
SAPBEXMenuLogo	Header area

SAPBEXTreeLevel0	Tree level 0
SAPBEXTreeLevel1	Tree level 1
SAPBEXTreeLevel2	Tree level 2
SAPBEXTreeLevel3	Tree level 3
Hierarchies	
SAPBEXHLevel0	Hierarchy level 0
SAPBEXHLevel1	Hierarchy level 1
SAPBEXHLevel2	Hierarchy level 2
SAPBEXHLevel3	Hierarchy level 3
Messages	
SAPBEXMessage	Messages
SAPBEXSystemMessage	System messages
SAPBEXTicker	Ticker
Links, Text, Buttons	
SAPBEXLnk	Standard links
SAPBEXMarked	Highlighted link
SAPBEXTxtStd	Standard text
SAPBEXTxtStdBold	Bold standard text
SAPBEXBtnStd	Standard button (background)
SAPBEXBtnStdIe4	Standard button (Internet Explorer 4)
SAPBEXBtnStdBorder	Standard and disabled button (border)
SAPBEXBtnEmph	Emphasized button (background)
SAPBEXBtnEmphIe4	Emphasized button (Internet Explorer 4)
SAPBEXBtnEmphBorder	Emphasized button (border)
SAPBEXBtnStdDsbl	Disabled button (background)
SAPBEXBtnEmphDsbl	Emphasized disabled button (background)
Controls & Indicators	
SAPBEXDdl	Dropdown Box
SAPBEXChb	Checkbox
SAPBEXRb	Radio button
SAPBEXTxtFld	Input field
SAPBEXTxtFldright	Right-aligned input field
SAPBEXTxtFldDsbl	Inactive input field
SAPBEXTextArea	Multi-line input area
SAPBEXTxtLbl	Indicator for input field

SAPBEXWhlOffset	Horizontal and vertical spacing
Loading Dialog Box *	
SAPBEXPopUpOuterBorder	3D border: Outer border
SAPBEXPopUpInnerBorder	3D border: Inner border
SAPBEXPopUpBg	Background
SAPBEXPopUpHeader	Title
Standard Template	
SAPBExTitle	Title
SAPBEXNavLine	Navigation bar
SAPBEXNavLineBorder	Navigation bar border
Tree Query Designer	
SAPBEXTreeLevel0Bg	Background, tree level 0
SAPBEXTreeLevel0Ttl	Expandable items, tree level 0
SAPBEXTreeLevel0Item	Items, tree level 0
SAPBEXTreeLevel1Bg	Background, tree level 1
SAPBEXTreeLevel1Ttl	Expandable items, tree level 1
SAPBEXTreeLevel1Item	Items, tree level 1
SAPBEXTreeLevel2Bg	Background, tree level 2
SAPBEXTreeLevel2Ttl	Expandable items, tree level 2
SAPBEXTreeLevel2Item	Items, tree level 2
SAPBEXTreeLevel3Bg	Background, tree level 3
SAPBEXTreeLevel3Ttl	Expandable items, tree level 3
SAPBEXTreeLevel3Item	Items, tree level 3
SAPBEXTreeBorder	Tree border
Tabs	
SAPBEXTbsLnk	Link in selectable tab page
SAPBEXTbsTab	Tab to be selected
SAPBEXTbsTabSel	Selected tab
SAPBEXTbsBdyEdg	Tab area border
SAPBEXTbsBorder	Tab page frame (Netscape 4.7)
Breadcrumbs Query Designer	
SAPBEXBrdCrBoxContBgColor	Background color of column and row area
SAPBEXBrdCrBoxBorder	Color of border for column and row area
SAPBEXBrdCrArea	Formatting of column and row area

SAPBEXBrdCrIna	Labeling of inactive navigation path
SAPBEXBrdCrAct	Labeling of active navigation path
SAPBEXBrdCrDiv	Formatting of navigation path
Listen Query Designer	
SAPBEXLicWhl	Formatting of list area
SAPBEXLicTtl	Display area header
SAPBEXLic	Bulleted list introduction
SAPBEXLicBul	Bullets
SAPBEXLicItem	Individual list entries
SAPBEXLicItemLnk	Individual list entries with links

* Not relevant for Netscape browser 4.7

Print Stylesheet

Use

When wanting to print out a Web application, you can apply a stylesheet to the print out. This differs from the stylesheet for the screen display. This proves useful if you only want to change the font size for the printout, for example.

Prerequisites

Only Internet Explorer is able to attach a stylesheet to printouts.

Procedure

1. To attach a stylesheet to your Web application, choose *Insert* → *Print Stylesheet.*
2. You can find the range of stylesheets in the *Select Print Stylesheet* dialog box. Select a stylesheet to see it in the preview window on the right-hand side.
3. To select a stylesheet for your Web application, select the required stylesheet and choose *OK.*

   Only those stylesheets stored on the BW server are displayed in the selection list. If you want to use a stylesheet that is not in the list, for example, one that is stored on your Web server, mark the checkbox beneath the selection list, enter the URL and choose *OK.*

Result

Your Web application HTML now contains the additional tag:

<link href="MIME/BEx/StyleSheets/BWReports_print.css" type="text/css" rel="stylesheet" media="print">

Although a stylesheet is set for the screen display by default, you must explicitly use *Insert* → *Print Stylesheet* to attach the print stylesheet.

As a result, the printed Web application is formatted according to this stylesheet.

Web Templates

Definition

A Web template determines the structure of a Web application. You use the Web Application Designer to insert placeholders into a HTML document for Web items [Seite 36] (in the form of object tags [Seite 227]), data providers [Seite 268] (in the form of object tags) and BW URLs. The HTML document with the BW-specific placeholders is called a **Web template.** Web templates are checked into the Web Application Designer. The HTML page that is displayed in the Internet browser is called a **Web application**. Depending on which Web items you have inserted into the Web template, a Web application contains one or more tables, an alert monitor, charts, maps, and so on.

Structure

The Web template is the keystone of a Web application. It contains placeholders for Web items and command URLs [Seite 231]. Data providers, Web items, and command URLs are generated for Web applications.

In the Web template, you determine from which data provider and it what way (Web items) the BW data is displayed. You also determine which additional options there are (BW URLs).

When a request is sent from a Web application to the SAP Web Application Server, a *template* object is generated. The structure of the requested HTML page is derived from this object. The following objects are generated on the basis of this *template*:

- Data Provider
- Web Item

Integration

As of BW 3.0, Web templates are stored on the SAP Web Application Server.

The option to store Web templates (for BW 2.0B or BW 2.1C, for example) on the ITS is still possible. We recommend, however, that you use the SAP Web Application Server.

Example

The following is an example of a simple Web template with a navigation block [Seite 151] and a table [Seite 43]:

```
<html>
<head>
<link rel="stylesheet" href="Bex/StyleSheets/BWReports.css">
<title>New Page 1</title>
</head>
<body>

<!--Template properties -->
<object>
```

```
                <param name=’OWNER’ value=’SAP_BW’>
                <param name='CMD' value='SET_PROPERTIES'>
                <param name='VARIABLE_SCREEN' value='X'>
                <param name='USE_PERSONALIZATION' value='X'>
</object>

<!--Create the data provider -->
<object>
                <param name=’OWNER’ value=’SAP_BW’>
                <param name=’CMD’ value=’SET_DATA_PROVIDER’>
                <param name='DATA_PROVIDER' value='View1 >
                <param name='DATA_PROVIDER_ID' value='VIEW1'>
                DATA_PROVIDER :View1
</object>

<!--Create and get the navigational block -->
<object WIDTH=”350”>
                <param name=’OWNER’ value=’SAP_BW’>
                <param name=’CMD’ value=’GET_ITEM’>
                <param name=’ITEM’ value=’Nav Block’>
                <param name='ITEM_ID' value='NAVBLOCK'>
                <param name='DATA_PROVIDER' value='View1 >
                ITEM :Nav Block
</object>
<br>

<!--Create and get the table -->
<object WIDTH=”600”>
                <param name=’OWNER’ value=’SAP_BW’>
                <param name=’CMD’ value=’GET_ITEM’>
                <param name='ITEM' value='Table'>
                <param name='ITEM_ID' value='TABLE'>
                <param name='DATA_PROVIDER' value='View1 >
                ITEM :Table
</object>

</body>
```

Object Tags

Definition

By using **object tags**, you can determine properties of Web templates, create data provider and Web items in a Web template, and supply them with parameters. The parameters that you set for Web items are used to control the settings you have made in the Web Application Designer (width and height, for example). It is possible, right at the start of the Web application, to send a generic command (filter, change attribute) or a command sequence [Seite 261] to the data provider. The parameters needed to send the command are attached to the object tag (see example).

Structure

An object tag starts with “<object...>” and ends with “</object>”. The SAP_BW object tags are identified by the parameter “owner”, and the value “SAP_BW”. Only this type of object is replaced in the Web template. All other types of object are transferred unchanged into the Web application.

It is possible to set parameters at the start of an object tag

```
<object WIDTH='350' HEIGHT='234' owner='SAP_BW' ...></object>
```

or within the object tag, as a parameter tag.

```
<object>
                  <param name='owner' value='SAP_BW'>
                  ...
</object>
```

Object tags are also displayed in non-HTML code mode in many HTML editors. Some HTML editors also give you the option of changing the size, and maintaining the parameters of the object tag. It is usually possible to use the drag and drop function to move the object tags around a page.

The following object tags play an important role in BEx Web Applications:

Object Tag for Properties of Web Templates [Seite 228]

Object Tag for Data Provider [Seite 229]

Object Tag for Web Items [Seite 230]

Object Tag for the Properties of Web Templates

Definition

Object Tag for defining the properties of Web templates.

Use

The properties of a Web template can be defined in an object tag. The properties include all the parameters that can be passed by URL when a Web template is called. This includes all the properties of the context menu.

Parameter 'CMD' must be set to 'SET_PROPERTIES' to indicate that these are the properties of the Web template.

Examples

Display template with variable input

```
<object>
        <param name=’OWNER’ value=’SAP_BW’>
        <param name='CMD' value='SET_PROPERTIES'>
        <param name='VARIABLE_SCREEN' value='X'>
    </object>
```

Context menu should not contain an enhanced menu

```
<object>
        <param name=’OWNER’ value=’SAP_BW’>
        <param name='CMD' value='SET_PROPERTIES'>
        <param name='MENU_ENHANCED' value=' '>
</object>
```

Object Tag for *Data Provider*

Definition

Object tag for creating Data Providers.

Use

The parameters that you need for creating a **data provider** are available in the Web Application Designer. You add other parameters, for example, to set up the value help (F4), or to send a command to the data provider before you call a page.

The ‘CMD’ parameter has to be filled with the ‘SET_DATA_PROVIDER’ to indicate that you are creating a data provider

Examples

Create Query View

```
<object>
        <param name=’OWNER’ value=’SAP_BW’>
        <param name=’CMD’ value=’SET_DATA_PROVIDER’>
        <param name='DATA_PROVIDER' value='View1 >
        <param name='DATA_PROVIDER_ID' value='VIEWABC'>
        DATA_PROVIDER :View1
</object>
```

Query view filtered by country (USA)

```
<object>
        <param name=’OWNER’ value=’SAP_BW’>
        <param name=’CMD’ value=’SET_DATA_PROVIDER’>
        <param name='DATA_PROVIDER' value='View1 >
        <param name='DATA_PROVIDER_ID' value='VIEWABC'>
        <param name=’FILTER_IOBJNM’ value=’0COUNTRY’>
        <param name=’FILTER_VALUE’ value=’US’>
        DATA_PROVIDER :View1
</object>
```

Object Tag for *Web Items*

Definition

Object tag for creating a Web item.

Use

The parameters that you need for creating a Web item are available in the Web Application Designer. You add further parameters, for example, to adjust the size at a later point, or to set a title.

The parameter ‘CMD’ has to be filled with ‘GET_ITEM’ to indicate that you are creating a Web item.

Example

Creating a Web Item

```
<object>
        <param name=’OWNER’ value=’SAP_BW’>
        <param name=’CMD’ value=’GET_ITEM’>
        <param name='ITEM' value='NavBlock'>
        <param name='ITEM_ID' value='NAVBLOCK'>
        <param name='DATA_PROVIDER' value='View1 >
        ITEM :Nav Block
</object>
```

Creating a Web item with height 400 pixels, width 500 pixels, and the title “Business Graphic”

```
<object WIDTH=’400’ HEIGHT=’500’>
        <param name=’OWNER’ value=’SAP_BW’>
        <param name=’CMD’ value=’GET_ITEM’>
        <param name='ITEM' value='Chart1'>
        <param name='ITEM_ID' value='PIECHART'>
        <param name='DATA_PROVIDER' value='View1 >
        <param name=’GENERATE_CAPTION’ value=’X’>
        <param name='CAPTION' value='Business Grafik'>
        ITEM :Chart 1
</object>
```

Command URLs

Definition

You can set command URLs in a Web template [Seite 225], as well as an object tag [Seite 227]. These are then used as bookmarks for URLs or the starting place for a URL.

Structure

Command URLs have the following structure:

```
<SAP_BW_URL Parameter1='Value1' Parameter2='Value2' ...>
```

When you generate the HTML page with one of the following URLs, command URLs are replaced by a similar URL:

http://myAppServer:myPort/SAP/BW/BEx?pageno=1&request_No=8&**Parameter1=Value1&Parameter2=Value2&...**

This URL requests a new page from the ITS. The parameters are removed. If you navigate in the Web application, then a new page is requested. The status of the previous page is changed due to the transfer of the parameters (for example, filters are set).

See also:

Command Sequences [Seite 261]

Calling up Web Templates

Use

The URL for calling a Web template is generated by the Web Application Designer. You can extend the URL by various parameters when you call up a Web template. These parameters can:

- Influence the data contents or display of the results (see Calling Parameterized Web Templates [Seite 237])
- Activate or deactivate different functions on the server.

Function

Choose from the following options to call up the template:

Standard call up and properties of Web templates

You can determine the properties of the Web template both in an object tag (see Object Tag for the Properties of Web Templates [Seite 228]) and or with command *Call Web Template*.

CMD	**LDOC**
Parameter	**Description**
TEMPLATE_ID	**Name of the Web template** Name under which you stored the Web template in the Web Application Designer.
STATELESS (optional) 'X' = Yes, ' ' = No	**End the connection to the server as soon as possible** For Web templates that are used almost exclusively for display without further navigation, it is more useful to set the attribute STATELESS. The session on the application server is terminated when the Web template is created. This saves resources on the application server. If this attribute is not specified, it is assumed that the page is still needed for navigating.
USE_PERSONALIZATION (optional) 'X' = Yes, ' ' = No	**Use personalized Web template** If the parameter is set to 'X', the personalized Web template for the current user is used. If personalization does not exist for the Web template or the parameter is not set, the Web template is executed without personalization.

STYLE_SHEET (optional)	**Path for a stylesheet that you want to use to display the Web template.** This overwrites any stylesheet that you may have already assigned.
TRACE (optional) 'X' = switch on, ' ' = do not switch on	**Switch on OLAP trace** To analyze problems with SAP, you usually need a trace. You can activate the trace with the help of note 112458 or by using the TRACE parameter.
JAVASCRIPT (optional) 'X' = switch on, ' ' = do not switch on	**Use of JavaScript** Using this parameter, you ensure that Web applications are created using JavaScript (extensive interaction options) or suppress the use of JavaScript (restricted interaction). If this parameter is not transferred, JavaScript is activated automatically in Web browsers of version >=4.0.
SNIPPET_OPERATIONS (optional) 'X' = switch on, ' ' = do not switch on	**Reload changed components of the page** You use this parameter to control whether only changed objects are loaded in navigation. This function has higher Web browser requirements. For this reason, this function is only supported by MS Internet Explorer version >=. If this parameter is not transferred, loading is activated automatically for the suitable Web browsers.
ENABLE_OPEN_WINDOW (optional) 'X' = switch on, ' ' = do not switch on	**Open new window** Using this parameter, you can control whether a new browser window is opened, for example, for the properties dialog box or for filtering. If this parameter is not specified, new windows are opened (if supported by the Web browser).
VARIABLE_SCREEN (optional) 'X' = display variable screen, ' ' = do not display, if possible	**Display variable screen** If you call up a Web template that has query views containing variables that are ready for input, you can use these parameters to display the variable screen. Is you do not set this parameter, or set it to ' ', the variable screen is hidden, whenever possible. However, it will still be shown if, for example, the required variables that are ready for input have not yet been filled.

MELT_VARIABLES (optional) 'X' = merge, ' ' = display each query individually	**Merge variables** If you call up a Web template containing several query views that have variables that are ready for input and you go to the variable screen display, you can determine, through these parameters, whether variables, which are used in all query views and in the same context (same InfoProvider, same compounding), are to be provided for input only once.
VARIABLES_CLEAR (optional) 'X' = reset variable, ' ' = do not reset	**Reset default variables** If you call up a Web template that contains one or several query views that have variables that are ready for input, you can specify this parameter to reset the default variables through the query view. The variables then contain the defaults from the variable definition.
SUPPRESS_WARNINGS (optional) 'X' = do not display warnings, ' ' = display warnings	**Suppress warnings** With this parameter, warnings are not displayed. With this parameter, warnings are not displayed.
SUPPRESS_SYSTEM_MESSAGES (optional) 'X' = Do not display system messages ' ' = Display system messages	**Suppress system messages** With this parameter, system messages are not displayed.
DATA_MODE (optional) 'NEW' = use current data 'STORED' = Use precalculated data 'HYBRID' = use precalculated data, request current data if this is missing. 'STATIC' = use precalculated HTML pages 'STATIC_HYBRID' = use precalculated HTML pages, if there are none, search by precalculated data and when there is none, request current data	**Data mode** This parameter is optional. If you do not specify one of the options for this parameter, a request is always sent to the OLAP processor and current data is read. For the modi 'STORED' and 'HYBRID', data has to be precalculated using the Reporting Agent [Extern]. See Defining the Web Templates Setting [Extern]

The parameters PAGEID and WBID that are used in BW 2.x are supported for the Web templates created under BW 2.x. We recommend, however, that you no longer use these.

Calling up the Web template without navigating

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC&TEMPLATE_ID=yourTemplate**&STATELESS=X**

Calling up the Web template with trace switched on

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC&TEMPLATE_ID=yourTemplate**&TRACE=X**

Calling up the Web template with reset variables and active variable screen

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC&TEMPLATE_ID=yourTemplate&VARIABLE_SCREEN=X&VARIABLES_CLEAR=X

Calling up the Web template with a different data provider

This call-up replaces all data providers [Seite 268] of the type 'query view' with the data provider specified. This means you can make a query or a query view available for use without having to do anything else on the Web, and you can use a predefined Web template for displaying the query.

As well as the parameters used in the default call up, this call up also has the following:

Call up for displaying a query:

Parameter	Description
INFOCUBE	**Technical name of the InfoProvider**
QUERY	**Technical name of the query**
VARIANT (optional)	**Variant, if you are not required to enter a variable**

Call up for displaying another query view:

Parameter	Description
DATA_PROVIDER_ID	**Technical name of the saved query view**
VARIANT (optional)	**Variant, if you are not required to enter a variable**

The parameters PAGEID and WBID that are used in BW 2.x are supported for the Web templates created under BW 2.x. We recommend, however, that you no longer use these.

Displaying a query by using a Web template of your choice

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC&TEMPLATE_ID=yourTemplate**&infocube=myCube&query=myQuery**

Setting your own Web template objects

As well as being able to define a new initialization for all data providers of a template, you can also convert each data provider specifically and each Web item, using parameterization. By doing this, you allow even your more complicated Web templates to be reused.

The index in the parameter is indicated in the following by '_I'.

The parameters for overwriting the data provider initialization are:

Parameter	Description
SET_DATA_PROVIDER_I	**Logical name of the data provider** Name of the data provider for which you want to set a new initialization
INFOCUBE_I (Option 1)	**Technical name of the InfoProvider**

QUERY_I (Option 1)	**Technical name of the query**
DATA_PROVIDER_ID_I (Option 2)	**Technical name of the saved query view**
VARIANT (optional)	**Variant, if you are not required to enter a variable**

The parameters for overwriting the Web item initialization are:

Parameter	Description
SET_ITEM_I	**Logical name of the Web item** Name of the Web item for which you want to set a new initialization
ITEM_ID_I (Option 1)	**Web item key** You create a Web item for a Web template based on a Web item setting that you have made in the Web Application Designer.
ITEM_CLASS_I (Option 2)	**Class name of the Web item class** Name of the ABAP object class that output generation transfers. This corresponds to the use of non-reusable Web items (standard Web items) in the Web Application Designer. Web items are created with the default values for the attribute. The class name for the table is, for example, CL_RSR_WWW_ITEM_GRID

Swapping 2 data providers and a Web item when calling up a Web template

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC&TEMPLATE_ID=yourTemplate**&SET_DATA_PROVIDER_1=myDataProvider1&infocube_1=myCube&query_1=myQuery&SET_DATA_PROVIDER_2=myDataProvider2&data_provider_id_2=mySpecialView&SET_ITEM_3=myItem&ITEM_ID_3=myPieChart**

Using a standard Web template for a data provider

If you call up the previous variant without specifying a TEMPLATE_ID, a standard Web template is used automatically. To make a Web template the standard Web template, go to *BW Customizing Implementation Guide → Business Information Warehouse → Settings Relevant for Reporting → Web-Based Settings → Determine a Standard Web Template*.

If there is no setting made here, the system uses a Web template generated by SAP.

Calling up a query without making any preparations in the Web

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC**&infocube=myCube&query=myQuery**

Calling Parameterized Web Templates

Use

The URL for calling a Web template is generated by the Web Application Designer. It is possible to copy the URL, and use it again as many times as you like.

A typical URL looks like this:

http://myAppServer:myPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate

The first part of the URL ((http://myAppServer:myPort/SAP/BW/BEx?) calls the BEx service in the SAP Web Application Server in the BW system. The next step is to call the Web template. The command 'LDOC' with the parameters 'TEMPLATE_ID' calls the Web template.

The command LDOC requests a new HTML page. The Web template is used to construct this HTML page. The Web application corresponding to the Web template is displayed in the Web Browser.

You parameterize the Web template by adding further parameters to the URL. These parameters are passed on to all data providers and Web items. Parameterizing the URL allows you to filter all the query views according to a particular country or cost center.

Examples

Filtering all query views according to Germany

http://myAppServer:myPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate&**FILTER_IOBJNM=0COUNTRY&FILTER_VALUE=DE**

Filtering all query views according to Germany, 2000

http://myAppServer:myPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate&**FILTER_IOBJNM_1=0COUNTRY&FILTER_VALUE_1=DE&FILTER_IOBJNM_2=0CALYEAR&FILTER_VALUE_2=2000**

Displaying all Web items with title

http://myAppServer:myPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate&**GENERATE_CAPTION=X**

Switching Web Templates

Use

You have the option to calling up Web reports [Seite 232] or to switch between different Web reports. When you switch Web reports, all the Web items and data providers in the Web template in which you started are retained. The Web items and data providers that appear in the new Web template, and for which there is no object with the same name, are generated from scratch. The system identifies the objects by their logical names.

The main difference between calling a Web template and switching to a different Web template is that objects from the initial Web template are transferred without being modified into the new Web report. This means, for example, that the query view of the navigation status stays the same.

This function is particularly useful for switching from overview pages (often containing only diagrams) to detailed pages (with tables and navigation blocks).

Functions

CMD	**CHANGE_TEMPLATE**
Parameter	**Description**
TEMPLATE_ID	**Name of the Web template** Name under which you stored the Web template in the Web Application Designer.

The parameters PAGEID and WBID that are used in BW 2.x are supported for the Web templates created under BW 2.x. We recommend, however, that you no longer use these.

<SAP_BW_URL CMD='CHANGE_TEMPLATE' TEMPLATE_ID=’DETAILS'>

Personalizing the Web Template

Use

With this command you can personalize a Web template for the user who is logged on. The next time this user calls the Web template with parameter USE_PERSONALIZATION=X, the same navigation status as was valid during personalization is displayed. This mechanism is useful especially for portal pages.

CMD	**PERSONALIZE**

Example

<SAP_BW_URL CMD='PERSONALIZE'>

Removing Personalization

Use

You use this command to remove the current user's Web template personalization.

CMD	**RESET_PERS**

Example

<SAP_BW_URL CMD='RESET_PERS'>

Creating Bookmarks

Use

Command that allows you to mark a Web application as a bookmark. The result of this instruction is to display a Web application with a bookmark-enabled URL. You can call this URL at any time, which results in a Web application that displays the same navigation status (including whether the hierarchy is expanded) as the Web application from which the instruction was called.

CMD	**BOOKMARK**
Parameter	**Description**
BOOKMARK_DATA **(optional)** ‘X’ = Yes, ‘ ’ = No	**Store historical data about the bookmark** The Web application with the historical data is displayed when you call the bookmark. Bookmarks are normally used without data.

Example

<SAP_BW_URL CMD='BOOKMARK'>

Changing Icon Directory

Use

You use this command if you are working on a special Web application, and you want to use icons other than the icons that are generally used as the symbols for expanding and collapsing hierarchies, for example. The command assigns a different icon directory to the Web template.

The names of the icons remain unaffected. In the new directory the icons have to appear with their original names, but you are able to alter them in other ways.

Functions

CMD	**SET_URLS**
Parameter	**Description**
ICON_PREFIX	**Relative path to an directory in the MIME repository or on the ITS**

Example

Displaying a Web report using icons from a different directory

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate**&cmd_1=cmd%3DSET_URLS%26ICON_PREFIX%3DmyPath**

A command sequence is used in this example.

See also:

Command Sequences [Seite 261]

Releasing a Web Template

Use

You can use this command to remove the current Web template with all its objects from the memory of the application server. The Web template cannot be accessed once this is done. You can only use the command Calling up a Web Template [Seite 232] to do this.

You can call up other Web templates by using commands in a command sequence.

Functions

CMD	PAGE_FREE

<SAP_BW_URL CMD='PAGE_FREE'>

Calling up the Variables Screen

Use

This command allows you to call up the variables screen again for the current page. You can then change the variable values that have been used until now in the variables screen.

You can also transfer new values over, as described in Default Variables for Web Applications [Seite 245]. Along with the values already set, these serve as the default variables screen.

If the variables screen appears when you call up a Web application, you have to adjust the Web template call (see Calling up a Web Template [Seite 232]→ Standard Call).

Functions

CMD	**PROCESS_VARIABLES**
SUBCMD	**VARIABLE_SCREEN**

<SAP_BW_URL CMD='PROCESS_VARIABLES' SUBCMD='VARIABLE_SCREEN'>

Default Variables for Web Applications

Use

Variables [Extern] play a central role in BW queries. For example, the entire query or only individual parts of the query can be filtered before reading data according to values. There are variables with automatic substitution, substitution from authorizations, or variables that are ready for input.

The variables for Web applications can be processed in the background (without a variable screen) or in the foreground (with a variable screen). In both cases it is desirable to predefine variables through parameterization. Therefore, all types of variables that are ready for input are supported

In contrast to filtering, the external value for predefining has to be specified for the variables. The date, for example, is transferred as it has been entered.

Features

You set default variables by parameterizing the URL. The variable values are separated from each other by different indexes.

The index in the parameter is indicated in the following by '**_I**'.

Characteristic Value Variables

Parameter variables or variables for several single values are predefined as follows:

Parameter	Description
VAR_NAME_I	**Technical name of the variables**
VAR_VALUE_EXT_I	**Attribute value in external display** Key for characteristic value in external display

Interval variables are predefined as follows:

Parameter	Description
VAR_NAME_I	**Technical name of the variables**
VAR_VALUE_LOW_EXT_I	**“From” characteristic value in external display** Key for characteristic value in external display
VAR_VALUE_HIGH_EXT_I	**“To” characteristic value in external display** Key for characteristic value in external display

Selection option variables are predefined as in the following:

Parameter	Description
VAR_NAME_I	**Technical name of the variables**

VAR_OPERATOR_I	**Operator** 'EQ' = Individual value 'BT' = Interval 'LT' = Less than 'LE' = Less than or equal to 'GT' = Greater than 'GE' = Greater than or equal to
VAR_VALUE_LOW_EXT_I	**“From” characteristic value in external display** Key for characteristic value in external display
VAR_VALUE_HIGH_EXT_I	**“To” characteristic value in external display** Key for characteristic value in external display This value must only be specified with VAR_OPERATOR='BT'.
VAR_SIGN_I	**Row effect** 'I' found values are added, 'E' found values are removed.

Variables for precalculated value sets are preassigned as follows:

Parameter	Description
VAR_NAME_I	**Technical name of the variables**
VAR_VALUE_EXT_I	**Name of value set**

Variables for Single Hierarchy Nodes or Variables for Several Hierarchy Nodes

Parameter	Description
VAR_NAME_I	**Technical name of the variables**
VAR_VALUE_EXT_I	**Node key in external display** Key for hierarchy node
VAR_NODE_IOBJNM_I	**Name of the node characteristic** With characteristic nodes and text nodes, you have to specify the characteristic name (0HIER_NODE).

Hierarchy, Formula, and Text Variables

Parameter	Description
VAR_NAME_I	**Technical name of the variables**
VAR_VALUE_EXT_I	**Hierarchy name, formula value, text**

Examples

Predefining the parameter variable

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate&**var_name_1=myParameterVariable&var_value_ext_1=4711**

Predefining the parameter variable (4711) and select options variable (1, 7 to 12)

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate&**var_name_1=myParameterVariable&var_value_ext_1=4711&var_name_2=mySelOptVar&var_operator_2=EQ&var_sign_2=I&var_value_low_ext_2=1&var_name_3=mySelOptVar&var_operator_3=BT&var_sign_3=I&var_value_low_ext_3=7&var_value_high_ext_3=12**

Predefining hierarchy nodes variable (DE, 0HIER NODE)

http://yourAppServer:yourPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate&**var_name_1=myHryNodeVariable&var_value_ext_1=DE&var_node_iobjnm_1=0HIER_NODE**

Changing the Values of Variables

Use

Using this command, you can change the values of variables on the current page.

Enter the variable values as described in Default Variables for Web Applications [Seite 245]. Variables that you do not specify maintain their previous value.

Functions

CMD	**PROCESS_VARIABLES**
SUBCMD	**VAR_SUBMIT**

Example

<SAP_BW_URL CMD='PROCESS_VARIABLES' SUBCMD='VAR_SUBMIT'
VAR_NAME_1='myParameterVariable' VAR_VALUE_EXT_1='4711'>

Adjusting and Enhancing the Context Menu

Use

You can adjust the context menu that is created automatically for table cells to your company-specific needs and scenarios.

You can copy functions of the enhanced context menu to the context menu that is not enhanced or you can hide functions.

You can also integrate your own context-specific entries in the context menu.

Functions

The following options are available:

Adjusting the Context Menu [Seite 251]

Enhancing the Context Menu [Seite 258]

Adjusting the Context Menu

Use

Along with properties such as *VARIABLE_SCREEN*, you can also modify the context menu for a Web template. You can turn every entry in the menu on or off or place it in the *Enhanced Menu.*

Features

All entries in the context menu are listed in the following list of properties:

Menu entries that are not specified retain their default value. The default values are underlined in the list

Properties	Description
Back **(MENU_BACK)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Back” Undo one navigation step on a data provider
Forward **(MENU_FORWARD)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry. “Forward” Repeat a navigation step on a data provider.
Back to Start **(MENU_BACK_TO_START)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Back to Start” Undo all navigation steps on a data provider
Keep Filter Value **(MENU_FILTER)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Keep Filter Value”
Keep Filter Value on Axis **(MENU_FILTER_ON_AXIS)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Keep Filter Value on Axis”

Choose Filter Value **(MENU_SELECT_FILTER)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Select Filter Value”
Keep Filter Value on Axis for Diagram **(MENU_FILTER_ON_AXIS_CHART)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Keep Filter Value on Axis for Diagram” When considering diagrams, it is often more useful to use the command “Keep Filter Value on Axis” than it is to keep the filter, which is removed when you drilldown. The geometry of the list remains the same and the chart/or map can still be interpreted. Therefore, there are separate settings for these Web items.
Keep Filter Value for Diagrams **(MENU_FILTER_CHART)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Keep Filter Value” for Diagrams When considering diagrams, it is often more useful to use the command “Keep Filter Value on Axis” than it is to keep the filter, which is removed when you drilldown. The geometry of the list remains the same and the chart/or map can still be interpreted. Therefore, there are separate settings for these Web items.
Filter and drilldown according to **(MENU_FILTER_DrILL_DOWN)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Filter and Drilldown According to”
Drilldown According to **(MENU_DRILL_UP)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Drilldown According to” “Drilldown” with the exception of navigation in maps.
Drilldown According to in Context of Map **(MENU_DRILL_UP_GIS)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Drilldown According to” in Context of Map “Drilldown” in the context of navigation in maps.

Insert drilldown according to **(MENU_DRILL_DOWN)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Insert Drilldown According to”
Swap ... with ... **(MENU_EXCHANGE_OBJECTS)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Swap ... with ...” Swap characteristics or structures.
Remove Drilldown **(MENU_REMOVE_DRILL_DOWN)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Remove Drilldown”
Swap Axes **(MENU_SWITCH_AXIS)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Swap Axes”
Expand/Collapse Hierarchy Nodes **(MENU_HIERARCHY_NODE_DRILL)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: Expand/Collapse Hierarchy Nodes
Expand Hierarchy **(MENU_HIERARCHY_DRILL)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Expand Hierarchy”
(De)activate Hierarchy **(MENU_HIERARCHY_STATE)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “(De)activate Hierarchy”

Sorting **(MENU_SORT)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Sort” Sort by characteristic cells and data cells.
Calculate Result As... **(MENU_CALCULATE_RESULT)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Calculate Result as” Calculations for value cells.
Calculate Single Values As... **(MENU_CALCULATE_VALUE)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Calculate Single Values As...” Calculations for value cells.
Cumulated **(MENU_CUMULATE_VALUE)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Cumulated” Calculations for value cells.
Displaying Documents **(MENU_DISPLAY_DOCUMENTS)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Display Documents”
Create Document **(MENU_DOCUMENT_CREATE)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Create New Document”
Show/Hide Document Properties **(MENU_DISPLAY_DOCUMENT_PROP)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Show/Hide Document Properties” In the context of the Web item *List of Documents.*

Show/Hide Document Selection Criteria **(MENU_DISPLAY_DOCUMENT_SELEC)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Show/Hide Document Selection Criteria” In the context of the Web item *List of Documents.*
Report/Report Jump Targets **(MENU_RRI)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: For report/report jump targets
Export as …CSV File **(MENU_EXPORT_TO_CSV)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Export as... CSV File”
Export as ... MS Excel 2000 File **(MENU_EXPORT_TO_XLS)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Export as ... MS Excel 2000 File”
Bookmark **(MENU_BOOKMARK)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Bookmark” Create bookmarks.
Bookmark with Displayed Data **(MENU_BOOKMARK_WITH_DATA)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Bookmark with Displayed Data” Create bookmark with the current data. When you call up the bookmark later, the “historical” data is displayed.
Personalize Web Page **(MENU_PERSONALIZE)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Personalize Web Page”

Display Charactieristic Properties **(MENU_CHARACTERISTIC_PROPERTIES)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Display Characteristic Properties” Properties for characteristic cells.
Value Cell Properties **(MENU_VALUE_PROPERTIES)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: For value cell properties Properties for value cells.
Query Properties **(MENU_QUERY_PROPERTIES)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Query properties”
Display variable screen **(MENU_VARIABLE_SCREEN)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: For calling up variables screen Calls the screen for entering variables if the Web application contains queries with variables.
Currency translation **(MENU_CURRENCY_CONVERSION)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Currency Translation” Calls up the currency translation dialog box.
Enhanced Menu **(MENU_ENHANCED)** ‘ ’= Not displayed ‘X’= “Always Display” in the basic menu ‘E’= Displayed in the “enhanced menu”	Menu entry: “Enhanced Menu” Display option for entries in the enhanced context menu.
ENHANCED_MENU ‘ ‘ = Start with basic menu ‘X’ = Start with enhanced menu	Start with Enhanced Menu You decide here whether the page opens with the basic menu (standard setting) or the enhanced menu.

Examples

For this example, *Swap Axes* appears in the basic context menu and the currency translation is completely hidden.

```
<object>
        <param name='OWNER' value='SAP_BW'>
        <param name='CMD' value='SET_PROPERTIES'>
        <param name='MENU_SWITCH_AXIS' value='X'>
        <param name='MENU_CURRENCY_CONVERSION' value=' '>
</object>
```

Enhancing the Context Menu

Use

As well as being able to make entries in the context menu visible, entries in the enhanced menu visible or entries in the enhanced menu invisible, you can also hang scenario-specific entries in the menu. You have two options:

- You define the new entries using the *Web Template Properties* object tag.
- You add the new entries to the menu using the JavaScript function.

The former option is described in this section.

In both cases, you have to write a JavaScript function that transfers the processing when you select the menu entry.

For more detailed information, see Adding a Menu Entry using JavaScript [Seite 327].

Functions

New entries are defined using different series of parameters in the Web template properties as follows:

Parameter	Description
CMENU_LABEL_I	**Labeling text in the menu**
CMENU_FUNCTION_I	**JavaScript function for processing the command** This function is implemented in JavaScript and is used to execute commands after selection of the menu entry.
CMENU_PARAMETER_I	**Free parameter** This parameter is passed to the JavaScript function 'CMENU_FUNCTION' and can be evaluated there as required. The parameter makes it possible to use a function for more than one menu entry.

CMENU_CELL_TYPE_I ' ' = No restriction 'CHARACTERISTIC' = Characteristic 'CHARACTERISTIC_VALUE' = Characteristic value 'STRUCTURE' = Structure 'STRUCTURE_VALUE' = Structure component value 'DATA' = Data cell 'EXCEPTIONS' = Item exceptions 'CONDITIONS' = Item conditions 'DOCUMENT_LIST' = Item document list	**Context of the entry** If you want the menu entry to appear only in certain contexts and not in all context menus, you can define this with 'cell_type' and 'filter'.
CMENU_FILTER_I	**Context of the entry** According to the value of ‘cmenu_cell_type’, different values are useful here: 'CHARACTERISTIC', 'CHARACTERISTIC_VALUE', 'STRUCTURE', 'STRUCTURE_VALUE': Iobjnm 'EXCEPTIONS': Exception ID 'CONDITIONS': Condition ID 'DOCUMENT_LIST': Document ID See *Examples*.
CMENU_VISIBILITY_I ‘ ‘= Not displayed ‘X’= Displayed in the “basic menu” ‘E’= Displayed in the “enhanced menu”	**Visibility of the entry** You specify whether the entry is to appear in the *basic menu* or also in the *enhanced menu*.
CMENU_POSITION_I 'TOP' = Before the "normal" entries 'BOTTOM' = After the "normal" entries	**Position of the entry** The entries are inserted in the order in which they were called. You can choose if the entry should appear before the "normal" entries or after them in the menu. They may not occur between the "normal" entries.

Examples

.

<object>

// Menu entry at the beginning and only on customer cells

```
<param name=’OWNER’ value=’SAP_BW’>
<param name='CMD' value='SET_PROPERTIES'>
<param name='CMENU_LABEL_1' value='Customer details'>
<param name='CMENU_FUNCTION_1' value='myMenuProcessor'>
<param name='CMENU_PARAMETER_1' value='1'>
```

```
<param name='CMENU_CELL_TYPE_1' value='CHARACTERISTIC_VALUE'>
<param name='CMENU_FILTER_1' value='0CUSTOMER'>
<param name='CMENU_VISIBILITY_1' value='X'>
<param name='CMENU_POSITION_1' value='TOP'>
```

// Menu entry at the end for IT homepage

```
<param name='CMENU_LABEL_2' value='Customer details'>
<param name='CMENU_FUNCTION_2' value='myMenuProcessor'>
<param name='CMENU_PARAMETER_2' value='2'>
<param name='CMENU_VISIBILITY_2' value='X'>
<param name='CMENU_POSITION_2' value='BOTTOM'>
```

// Menu entry at the beginning and only on material groups

```
<param name='CMENU_LABEL_3' value='Materials'>
<param name='CMENU_FUNCTION_3' value='myMenuProcessor'>
<param name='CMENU_PARAMETER_3' value='3'>
<param name='CMENU_CELL_TYPE_3' value='CHARACTERISTIC_VALUE'>
<param name='CMENU_FILTER_3' value='0MATGROUP'>
<param name='CMENU_VISIBILITY_3' value='X'>
<param name='CMENU_POSITION_3' value='TOP'>
```

</object>

You can find an example implementation for the JavaScript function “myMenuProcessor” under JavaScript [Seite 318].

Command Sequences

Use

There are some problems that require you to be able to change several objects differently with one command [Seite 231]. For example, with previous methods, you could not filter one data provider [Seite 268] for the fiscal year 1999 and another data provider for 2000 with the same request (command).

A command sequence allows you to add new commands onto an original command. Data is only requested from the OLAP processor and the HTML page is only sent back to the Web Browser when all the commands have been processed.

The commands in the sequence are added to the original command as the parameter CMD_N. Note that you have to replace the characters '=' and '&' with their hexadecimal display in the command sequence for commands in the sequence that are transported using a URL.

- replace '=' with '%3D'
- replace '&' with '%26'

Each command in the sequence can have a maximum of 250 characters. If it contains more characters, these extra characters are cut off.

If the command sequence takes up too much space to fit into a URL, add the attribute 'NO_OUTPUT' to a command instead. As a result, the command is executed and an empty page is sent back. However, no data is read. This is therefore useful when you access a main frame from a control frame, for example. Using JavaScript, you can then carry out a sequence of single commands in the main frame and only leave out the attribute 'NO_OUTPUT' in the last command.

Examples

Start Web application and filter Data Provider 1 according to DE filters and Data Provider 2 according to US filters

http://myAppServer:myPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate&**CMD_1=DATA_PROVIDER%3DDP1%26FILTER_IOBJNM%3D0COUNTRY%26FILTER_VALUE%3DDE**&**CMD_2=DATA_PROVIDER%3DDP2%26FILTER_IOBJNM%3D0COUNTRY%26FILTER_VALUE%3DUS**

Filter command URL to Data Provider 1 according to calendar year 2000, change title of graphic (Chart) GRAPHIC to '2000', and change title of table TABLE to 'Details2000'

<SAP_BW_URL DATA_PROVIDER='DP1' FILTER_IOBJNM='0CALYEAR' FILTER_VALUE='2000' **CMD_1='ITEM=GRAPHIC&CAPTION=2000' CMD_2='ITEM=TABLE&CAPTION=Details2000'**>

Using Forms

Use

With HTML forms you can integrate input fields easily into an HTML page. You can also use this HTML technology to create BEx Web applications.

Functions

Web Template Parameterization

By using forms, you can set customized parameters when calling up Web applications. To do this you need an HTML document with a form, from which the URL for the Web application is called up with the relevant parameters.

After calling up the following HTML document, the user is offered a form in which he or she can choose a calendar year and a country from dropdown boxes. After executing the submit command, the Web application appears with preset filters in the query views.

```
<html>
<body>
<table>
<form method="POST"
http://myAppServer:myPort/SAP/BW/BEx?CMD=LDOC&template_id=yourTemplate&FILTER_IOBJNM_1=0CALYEAR&FILTER_IOBJNM_2=0COUNTRY ">

      <tr>
        <td>calendar year</td>
        <td><select size="1" name="FILTER_VALUE_1">

         <Option value="1997">1997</Option>
         <Option value="1998">1998</Option>
         <Option value="1999">1999</Option>
         <Option value="2000">2000</Option>
         </select></td>
         </tr>
         <tr>

         <td>Land</td>
             <td><select name="FILTER_VALUE_2">

         <Option value="BR">Brazil</Option>
             <Option value="DE">Germany</Option>
             <Option value="FR">France</Option>
             <Option value="GB">Great Britain</Option>
             <Option value="JP">Japan</Option>
             <Option value="RU">Russia</Option>
             <Option value="ES">Spain</Option>
             <Option value="US">USA</Option>

</table>
<input type="submit" value="Submit" name="Submit">
</form>
</body>

</html>
```

Buttons and Forms in Web Templates

You use the anchors () and HTML forms to integrate commands into a Web template. This command can effect one or several Web items or Data Providers.

At the point where URLs usually appear in HTML, you can use placeholders, that are described under command URLs [Seite 231] . These are automatically replaced during processing, so that only valid URLs appear in the HTML pages that you have created.

Drilldown query view 1 by country and filter the calendar year to 2000

<a href= <SAP_BW_URL DATA_PROVIDER='View 1' CMD='Expand' IOBJNM='0COUNTRY' FILTER_IOBJNM='0CALYEAR' FILTER_VALUE='2000'>">Year 2000 + Drilldown by country

Form, in which the user can choose a calendar year and a country from dropdown boxes.

```
<form method="POST" action="<SAP_BW_URL DATA_PROVIDER='*' MULTI='X'
FILTER_IOBJNM_1='0CALYEAR' FILTER_IOBJNM_2='0COUNTRY'>">

<table>

      <tr>
        <td>calendar year</td>
        <td><select size="1" name="FILTER_VALUE_1">

         <Option value="1997">1997</Option>
         <Option value="1998">1998</Option>
         <Option value="1999">1999</Option>
         <Option value="2000">2000</Option>
         </select></td>
         </tr>
         <tr>

         <td>Land</td>
             <td><select name="FILTER_VALUE_2">

         <Option value="BR">Brazil</Option>
         <Option value="DE">Germany</Option>
         <Option value="FR">France</Option>
         <Option value="GB">Great Britain</Option>
         <Option value="JP">Japan</Option>
         <Option value="RU">Russia</Option>
         <Option value="ES">Spain</Option>
          <Option value="US">USA</Option></select></td>
         </tr>

</table>
<input type="submit" value="Submit" name="Submit">
</form>
```

Buttons that filter view 1 according to calendar years

```
<form method="POST" action="<SAP_BW_URL DATA_PROVIDER='View 1'
FILTER_IOBJNM='0CALYEAR'>">
<input type="submit" value="1998" name="FILTER_VALUE">
<input type="submit" value="1999" name="FILTER_VALUE">
<input type="submit" value="2000" name="FILTER_VALUE">
</form>
```

Language-Dependent Texts

Definition

By using this BW-specific tag, you can install language-dependent texts in a Web application.

Use

You create text elements for an ABAP report that can then be translated.

With the help of the SAP_BW_TEXT tag that you insert into a Web template, you can access the texts as follows:

<SAP_BW_TEXT PROGRAM=’MYREPORT’ KEY=’001’>

You can also use language-dependent headings for Web items. You can specify the headings as parameters either in the object tag of the Web item

<param name=’CAPTION’ value=’SAP_BW_TEXT?PROGRAM=MYREPORT&KEY=001’>

or fill the heading in the Web Application Designer as follows:

SAP_BW_TEXT?PROGRAM=MYREPORT&KEY=001

You can find additional information about language-dependent texts under Creating ABAP Programs for Maintaining Language-Dependent Texts [Seite 266].

Creating ABAP Programs for Maintaining Language-Dependent Texts

Use

To make Web applications independent from static texts, you can maintain and translate the text in an ABAP table. The Web application is then filled with the corresponding texts according to the logon language.

Prerequisites

You are in the ABAP Editor (transaction SE38)

Procedure

1. In the *Program* field enter the name of the program, for example ZHTML_TEXTS and in the subobject screen, select *Source Code.*
2. Choose (*Create*). You reach the *ABAP: Program Properties <Name of Program> Change* screen.
3. Enter the title of the program, for example *Web Application Texts.*
4. Under *Type* in the *Attributes* field, choose *Executable Program* and then *Save.* You reach the *Create Object Catalog Entry* dialog box.
5. In the *Attributes* field under *Package* enter *$TMP* and save the program as a *Local Object*.

   You have created an ABAP report called ZHTML_TEXTS
6. In the menu bar choose *Goto → Text Elements → Text Symbols.* You reach the *ABAP Text Elements: Display Text Symbols Language English* screen. Choose (*Create <-> Change*).

   Enter your texts in the empty table.

   a. In the *Sym* field enter the numerical key of the new text element (0-999), for example, 001.

   b. In the *Text* field, enter the name of the text element, for example, *Credit Memos*.

      The *dLen* field is filled automatically with the actual length of the text you entered, for example, *12* in the case of *Credit Memos.*

   c. In the *mLen* field, enter the maximum length of the text field.

      If the maximum length of the text field (mLen) is smaller than the actual length of the text field (dLen), the system asks you whether you want the text to be shortened to the maximum length.

   d. When you have entered all your texts, choose (*Activate*). You reach the *ABAP Text Elements: Change Text Symbols Language English* screen.
7. In the menu bar of the *ABAP Text Elements: Change Text Symbols Language English,* choose *Goto → Translation.* You reach the *Target Language for Translation* screen.

   a. Select the target language, into which you want to translate the texts, for example, DE and choose (Continue). You reach the *Translation: ABAP Text Pool: <Name of Program> ($) from Language <X> to <Y>,* on which your texts and translation proposals from the ABAP text pool are displayed. For example, “Credit Memos” is translated as “Gutschriften”. You can transfer the proposals or edit them as you wish.

The program generated the text translations from the ABAP text pool if corresponding entries are available there. For texts without proposals you have to enter the translation yourself.

b. Choose *Save.*

Result

In the Web template, you can now insert the following tag for the example text used here *ZHTML_TEXTS*: <SAP_BW_TEXT PROGRAM=’ZHTML_TEXTE’ KEY=‘001’>.

The command inserts the text that you maintained with the key *001* in the table, in accordance with the logon language in the Web template, for example as the table title.

<th><SAP_BW_TEXT PROGRAM=‘ZHTML_TEXTE’ KEY=‘001‘></th>

Data Provider

Definition

Data Providers are objects that deliver data. When you navigate through the data, or parameterize the call-up, it may change the status of the data provider. A data provider can supply any number of Web items [Seite 36] with data.

Structure

Generic Attributes

Generic attributes are attributes that are valid for every data provider. You need these attributes as soon as you begin to create a data provider.

Attributes	Description
DATA_PROVIDER (or **name**)	**Logical name of the data provider** This name is used to attach Web items to a particular data provider and to send commands to the data provider. The name must be unique within the Web template [Seite 225]
WBID (or **DATA_PROVIDER_WBID**) **(optional)**	**Key assigned to the Excel workbook, under which you stored the data provider in the Business Explorer.** You have to have saved the workbook in BW (favorites, roles). If you do not specify this parameter, the workbook ID (WBID) of the Web template is used instead.

You cannot change these attributes with a command URL [Seite 231].

Commands

It is possible to apply commands, such as filters, to data providers. In most cases, you must specify parameters for these commands. With some commands, it is possible to specify a whole list of parameter values. The parameter name is given an index "_1", "_2". In this rest of this document, this index is referred to as "parameter name_N"

There is at least one example given for every command. This is displayed in the same syntax as described under Command URLs [Seite 231].

All commands have the following parameters in common:

Parameter	Description

CMD	**Name of the command** Most commands are triggered by this parameter. As well as this type of command, there are also generic commands with parameters that you are able to assign to other commands. Generic commands are always applied after the named command.
DATA_PROVIDER **DATA_PROVIDER_N**	**Name of the data provider** You are able to apply a command to several data providers. You either specify a particular data provider, or display a list of possible data providers, or restrict the number of data providers by using wildcards (MULTI='X'). The command is applied to all these data providers, as long as they support this action. You must specify the data provider(s).
MULTI	**Using the DATA_PROVIDER as a reference** If MULTI is set to 'X', the command is applied to all the data providers that have 'DATA_PROVIDER' in their name. '*' means all data providers, for example. This parameter is optional. 'X' = Yes, ' ' = No

Applying the command to the data provider 'DP 1'

```
<SAP_BW_URL DATA_PROVIDER='DP 1' CMD='...' ...>
```

Applying the command to the data providers 'DP 1' and 'DP 1'

```
<SAP_BW_URL DATA_PROVIDER_1='DP 1' DATA_PROVIDER_1='DP 2' CMD='...'
...>
```

Applying the command to all the data providers that contain 'USA' in their name

```
<SAP_BW_URL DATA_PROVIDER='*USA*' MULTI='X' CMD='...' ...>
```

Stored Query Views

Definition

Stored query views are saved navigational states in a BW query. When you call up the Web template, a query view (not a database view) is created on the server with the saved navigational state.

Structure

Stored query views have the following attributes:

Attributes	Description
DATA_PROVIDER_ID You cannot change this attribute with a command URL.	**Key for a query view** The DATA_PROVIDER_ID that you specify, determines the initial status of the query view.
VARIANT (optional) You cannot change this attribute with a command URL.	**Name of the variant used to fill the variables** When you save a query view, the current variable values are saved with it. You can overwrite the values by specifying a variant (optional). You create variants from the variable screen.
STYLE_SHEET (optional)	**Path to a stylesheet that you want to use to display F4-Help.** If you do not specify anything here, the Web template stylesheet is used instead.
HOME_FRAME (optional)	**Name of the main frame** If you use HTML frame technology to display the data and you want to display the input Help in a separate frame to the Web template, you have to specify the name of the frame where the Web template is displayed for stored query views in the HOME_FRAME attribute . You also have to specify the attribute TARGET_HELP_FRAME for the navigation block Web item.
BLOCK_SIZE (optional)	**Number of rows per block in the input help** By entering this parameter, you can determine the number of rows displayed before an index to leaf through other blocks is started. If the value is set to 0, the complete table is displayed, regardless of the number of rows.

The parameters VIEWID and WBID (DATA_PROVIDER_WBID) used in BW 2.x are still supported. We recommend, however, that you no longer use these.

You can apply the following commands to a stored query view:

Properties of Query Views

Definition

Instruction for a query view.

Use

The query view has the most varied properties. You can change the properties by specifying the attribute and its value. You therefore do not have to specify parameter 'CMD'.

The query view properties are evaluated at the end of command processing.

Structure

Property	Description
SUPPRESS_ZEROS ‘X’ = Yes, ‘ ’ = No	Hide rows/columns only containing null values (for all value cells for this combination of characteristics).
ZERO_PRESENTATION '0' = display '1' = display without currency/unit '2' = do not display '3' = display zero text	Zero value display
ZERO_TEXT	Text for zero value display '3'
SHOW_SCALING_FACTORS ‘X’ = Yes, ‘ ’ = No	Display scaling factors and exclude currency / unit
SIGN_PRESENTATION '1' = sign before number '2' = sign after number '3' = concatenated display	Sign display
FULL_CONCAT_KEYS ‘X’ = Yes, ‘ ’ = No	Display of characteristic and attribute keys fully concatenated.
SHOW_DOCUMENTS ‘X’ = Yes, ‘ ’ = No	Show document links for each characteristic variant.
SHOW_BOR_OBJECTS ‘X’ = Yes, ‘ ’ = No	Show Drag&Relate links (BOR links) for each characteristic variant of a BOR InfoObject.
UHRY_ACTIVE_ROWS ‘X’ = Yes, ‘ ’ = No	Display rows as hierarchy
UHRY_CAPTION_ROWS	Labeling for rows for hierarchical display

UHRY_LEVEL_ROWS	Number of objects (characteristics, hierarchies, structures) on the rows that are initially visible as hierarchy when display is switched on.
UHRY_ACTIVE_COLUMNS 'X' = Yes, ' ' = No	Display columns as hierarchy
UHRY_CAPTION_COLUMNS	Labeling for columns for hierarchical display
UHRY_LEVEL_COLUMNS	Number of objects (characteristics, hierarchies, structures) on the columns that are initially visible as hierarchy when display is switched on.

Integration

You can add the query view properties to any other command !

Resetting and Reinitializing Query Views

Use

You use this command to reinitialize data providers [Seite 268] of the type *Query View*. The query view is recreated according to the parameters and the Web items display the data for the new stored query view [Seite 270].

If you are using a Web item that requires, for example, a specific characteristic (such as the dropdown box [Seite 143] filter), the new data provider supports this characteristic.

Functions

CMD	RESET_DATA_PROVIDER
Parameter	**Description**
INFOCUBE	**Technical name of the InfoCube**
QUERY	**Technical name of the query**
VARIANT (optional)	**Variant, if you are not required to enter a variable**

or

CMD	RESET_DATA_PROVIDER
Parameter	**Description**
DATA_PROVIDER_ID	**Technical name of the view**
VARIANT (optional)	**Variant, if you are not required to enter a variable**

Converting the data provider “View1” to another query:

<SAP_BW_URL DATA_PROVIDER='View1' CMD='RESET_DATA_PROVIDER' INFOCUBE='myCube' QUERY='myQuery'>

Converting the data provider “View1” to a saved view:

<SAP_BW_URL DATA_PROVIDER='View1' CMD='RESET_DATA_PROVIDER' DATA_PROVIDER_ID='myViewID'>

Displaying a Copy of a Data Provider on a New Page

Use

This command enables you to display a copy of the current navigation status of a data provider [Seite 268] on a new page. This command is suitable for detailed windows, in which you navigate independently of the overview window (see example).

Functions

CMD	RELEASE_DATA_PROVIDER
Parameter	**Description**
TEMPLATE_ID (optional)	**Name of the Web template** Name under which you stored the Web template in the Web Application Designer. If this parameter is not specified, the standard template is used.
Any other parameters for parameterizing your Web template	See Calling Up Web Templates [Seite 232]

Displaying a copy of the status of the data provider “View 1” on a new page:

<SAP_BW_URL DATA_PROVIDER='View1' CMD='RELEASE_DATA_PROVIDER'>

Displaying a copy of the status of the data provider “View 1” in a new window with template 1:

JavaScript call: SAPBWOpenWindow("<SAP_BW_URL DATA_PROVIDER='View1' CMD='RELEASE_DATA_PROVIDER'>","Details",600,400);

Calling Dialog Query Properties

Definition

Instruction for a query view.

Use

You can call the *Query Properties* dialog with this instruction.

Structure

CMD	**Process_help_window**
HELP_SERVICE	**QUERY_PROPERTIES**

Back, Forwards, and Back to Start

Definition

Back, forwards, and back to start is a command for a query view in the Web template.

Use

By using this command, you can do the following for a query view:

- undo the last action
- undo all actions
- or, in the event that you undo one or more actions, execute them again.

In contrast to using the set function *Back* and *Forwards* available in the Web browser, these commands only affect the specified data provider and not the entire page.

Structure

CMD	Description
BACK	Undoes the last action executed for this query view
RESET	Goes back to the navigation status that was visible when the Web application was called
FORWARD	Executes a previously undone action again

The last action for query view1 is now undone

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='BACK'>
```

All query views are now reset to the status that was set when they were called

```
<SAP_BW_URL DATA_PROVIDER='*' MULTI='X' CMD='RESET'>
```

Filtering

Definition

Filter is a command for a query view in the Web template.

Use

You set filter values for characteristics and structures within a query view. It is possible to set several filters for the same characteristic / structure, or the same filter for several different characteristics / structures. *Filter* is a generic command, which means you do not have to set the ‘CMD’ parameter.

You are able to add the filter parameters to any other command !

The actual filtering process is carried out at the end of the operation.

Structure

Parameter	Description
FILTER_IOBJNM **FILTER_IOBJNM_N (optional)**	**Name of the charcateristic / structure that you want to filter by** Specify the technical name of the characteristic (0COUNTRY, for example) or the structure (25 characters) here.
FILTER_COLLAPS (optional) ‘X’ = Yes, ‘ ’ = No	**Removing filter characteristics from the drilldown** The characteristics that are specified under FILTER_IOBJNM, are removed from the axes after the filter has been applied. If you do not specify the parameters, the system assumes you want to use the value ‘X’ = Yes.
VAR_SIGN_N (optional)	**Row effect** 'I' found values are added, 'E' found values are removed. If the parameter is not specified, then 'I' is accepted.

If the *FILTER_IOBJNM_N* entry is missing from an index *n,* the value from *FILTER_IOBJNM* is used, if available.

For filtering individual values, the following parameters are also specified:

Parameter	Description

FILTER_VALUE **FILTER_VALUE_N** **FILTER_VALUE_EXT** **FILTER_VALUE_EXT_N**	**Filter Value** Value that is filtered next. If the variant with the ending 'EXT' is chosen, the entire value in brackets has to be specified in the external dislay, for example, 12.24.2000. If the ending 'EXT' is not used, the entire value in brackets has to be specified in the internal display, for example, 20001224 for 12.24.2000.
FILTER_VALUE_TYPE (optional) **FILTER_VALUE_TYPE_N (optional)**	**Type of value specified under FILTER_VALUE** ‘VALUE’ : Key for a characteristic value ‘VARIABLE_EXIT’ : Name of an exit variable The filter is set using the values returned by the variable exit. Parameter, interval, and selection option variables are permitted for customer and SAP exit variables as well as for default values.
OPERATOR (optional) **OPERATOR_N (optional)**	**Operator** 'EQ' = Individual value 'LT' = Less than 'LE' = Less than or equal to 'GT' = Greater than 'GE' = Greater than or equal to If no operator is specified, then 'EQ' is accepted.

For filtering intervals, the following parameters are also accepted:

Parameter	Description
FILTER_VALUE_LOW **FILTER_VALUE_LOW_N** **FILTER_VALUE_LOW_EXT** **FILTER_VALUE_LOW_EXT_N**	**Filter value – lower limit (no brackets)**

FILTER_VALUE_HIGH **FILTER_VALUE_HIGH_N** **FILTER_VALUE_HIGH_EXT** **FILTER_VALUE_HIGH_EXT_N**	**Filter value – upper limit (no brackets)**

For filtering hierarchy nodes, the following parameters are also accepted:

Parameter	Description
FILTER_VALUE **FILTER_VALUE_N**	**Hierarchy Node Name**
FILTER_NODE_IOBJNM (optional) **FILTER_NODE_IOBJNM_N (optional)**	**Name of the Node Characteristic** You have to specify the name of the node characteristic if you want to filter according to hierarchy nodes. With characteristic nodes and text nodes, you have to specify the characteristic name (0HIER_NODE).

Examples

Filter query view1 according to the country Germany

```
<SAP_BW_URL DATA_PROVIDER='View1' FILTER_IOBJNM='0COUNTRY' FILTER_VALUE='DE'>
```

Filter query view1 according to the first three months

```
<SAP_BW_URL DATA_PROVIDER='View1' FILTER_IOBJNM='0CALMONTH'
FILTER_VALUE_LOW_EXT='1' FILTER_VALUE_HIGH_EXT='3'>
```

Filter all query views according to costs, and the countries Germany and the USA

```
<SAP_BW_URL DATA_PROVIDER='*' MULTI='X'
FILTER_IOBJNM_1='DRB9ZVVMBCHVX4F04Z1JGKYVC'
FILTER_VALUE_1='DTG057U7OQ8K2ALKCMR2AWM14' FILTER_IOBJNM_2='0COUNTRY'
FILTER_VALUE_2='DE' FILTER_IOBJNM_3='0COUNTRY' FILTER_VALUE_3='US'>
```

Filter all query views according to the current month

```
<SAP_BW_URL DATA_PROVIDER='*' MULTI='X' FILTER_IOBJNM='0CALMONTH'
FILTER_VALUE='0CMONTH' FILTER_VALUE_TYPE='VARIABLE_EXIT'>
```

Removing Filters

Definition

Remove filter is a command for a query view in the Web template.

Use

You use this command to remove the filter from a characteristic or a structure for one or more query views.

Structure

CMD	**Remove_Filter**
Parameter	**Description**
IOBJNM **IOBJNM_N**	**Name of the characteristic/structure** Specify here the technical name of the characteristic (0COUNTRY, for example) or structure (25 characters) from which you want to delete the filter. It is also possible to specify a list of characteristics/structures.
ALL 'X' = Yes, ' ' = No	**Remove all filters** Alternatively to listing characteristics and structures, you can remove all filters.

Examples

Remove the filter by country from query view1

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Remove_Filter' IOBJNM='0COUNTRY' >
```

Remove the filter by country from all query views and filter according to calendar year 2000

```
<SAP_BW_URL DATA_PROVIDER='*' MULTI='X' CMD='Remove_Filter' IOBJNM='0COUNTRY'
FILTER_IOBJNM='0CALYEAR' FILTER_VALUE='2000'>
```

Remove all filters by country from query views and filter according to calendar year 2000

```
<SAP_BW_URL DATA_PROVIDER='*' MULTI='X' CMD='Remove_Filter' ALL='X'
FILTER_IOBJNM='0CALYEAR' FILTER_VALUE='2000'>
```

Calling Value Help

Definition

Calling value help is a command for a query view in the Web template.

Use

By using this command you can call the filter value help for a characteristic or a structure for a query view.

Structure

CMD	**Process_help_window**
HELP_SERVICE	**DP_VIEW_FILTER**
Parameter	**Description**
IOBJNM	**Name of the characteristic/structure** Specify the technical name of the characteristic here (for example, 0COUNTRY) or the structure (25-place character sequence) for which you want to call value help.
BOOKED_VALUES	**Using posted values for value help** If this parameter is not specified or is not set to ‘X’, only values are displayed in the input help that are also booked in the InfoProvider within the scope of the currently valid filter conditions. This can take a long time under certain conditions. If the parameter is set to ' ', all dimension table values are displayed. This can be quicker, but can also display values that do not appear in the InfoProvider under the current filter conditions and when filtering can give the result *No corresponding data found*.

Drilldown

Definition

Drilldown is a command for a query view in the Web template.

Use

Use this command to change the position of a characteristic or a structure for one or more query views.

Structure

CMD	**Expand**
Parameter	**Description**
IOBJNM	**Name of the characteristic/structure** Specify the technical name of the characteristic here (for example, 0COUNTRY) or the structure (25-place character sequence that you want to bring into the drilldown.
AXIS (optional) 'X' = columns 'Y' = rows ' ' = Free characteristics (=remove drilldown)	**Axis on which the characteristic/structure is to be based** If PARENT_IOBJNM is not specified, the characteristic/structure is brought onto the axis behind the other characteristics/structures. If you do not specify the parameter 'AXIS', the value 'Y' is used for characteristics, and 'X' for structures.
PARENT_IOBJNM (optional)	**Name of a characteristic/structure on the axis** When you specify this parameter, you can drag a characteristic/structure behind a different one on an axis.

Examples

Drilldown query view1 by country

```
<SAP_BW_URL DATA_PROVIDER='View 1' CMD='Expand' IOBJNM='0COUNTRY' >
```

Drilldown query view 1 by country and filter the calendar year to 2000

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Expand' IOBJNM='0COUNTRY'
FILTER_IOBJNM='0CALYEAR' FILTER_VALUE='2000'>
```

Drag periods 1, 2, and 3 (2000) from query view1 to the columns

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Expand' IOBJNM='0FISCPER' AXIS='X'
FILTER_IOBJNM='0FISCPER' FILTER_VALUE_1='2000001' FILTER_VALUE_2='2000002'
FILTER_VALUE_3='2000003'>
```

Remove Drilldown

Definition

Remove drilldown is a command for a query view in the Web template.

Use

Use this command to remove a characteristic or a structure from the drilldown for one or more query views. This command is the same as the command Drilldown [Seite 283] if the parameter AXIS=' ' is set.

Structure

CMD	**Collapse**
Parameter	**Description**
IOBJNM	**Name of the characteristic/structure** Specify the technical name of the characteristic here (for example, 0COUNTRY) or the structure (25-place character sequence) that you want to remove from the drilldown.

Example

Remove drilldown by country from query view1

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Collapse' IOBJNM='0COUNTRY' >
```

Switching Characteristics/Structures

Definition

Switch Characteristic/Structures is a command for a query view in the Web template.

Use

Use this command to remove a characteristic or a structure from a characteristic or a structure, for one or more query views.

Structure

CMD	**Exchange**
Parameter	**Description**
IOBJNM_1	**Name of characteristic/structure** Specify the technical name of the 1st characteristic (0COUNTRY, for example) or the 1st structure (25 characters) here.
IOBJNM_2	**Name of characteristic/structure** Specify the technical name of the 2nd characteristic (0COUNTRY, for example) or the 2nd structure (25 characters) here.

Example

Replace drilldown by country with drilldown by calendar year in query view 1

```
<SAP_BW_URL DATA_PROVIDER='View 1' CMD='Exchange' IOBJNM_1='0COUNTRY'
IOBJNM_2='0CALYEAR'>
```

or

```
<SAP_BW_URL DATA_PROVIDER='View 1' CMD='Exchange' IOBJNM_1='0CALYEAR'
IOBJNM_2='0COUNTRY'>
```

Swapping Axes

Definition

Swap Axes is a command for a query view in the Web template.

Use

This command swaps the roles of the axes (the list is reversed). All the characteristics and structures in the rows are moved into the columns, and all the characteristics and structures in the columns are moved into the rows.

Structure

CMD	Switch_Axes

Swap axes for the query view1

```
<SAP_BW_URL DATA_PROVIDER='View 1' CMD='SWITCH_AXIS'>
```

Setting the Navigational State

Definition

Setting the navigational state is a command for a query view in the Web template.

Use

By calling this command, you can restructure or redistribute characteristics and structures on the axes.

Structure

CMD	**SET_NAV_STATE**
Parameter	**Description**
ALL 'X' = Yes, ' ' = No	**Redistribute all characteristics and structures** If this parameter is set to 'X', then all characteristics and structures are taken from the axes and redistributed according to the other parameters. If the parameter is not set or is set to ' ', then the listed characteristics are assigned according to the parameters on the axes.
IOBJNM **IOBJNM_N**	**Name of the characteristic/structure** Specify the technical name of the characteristic here (for example, 0COUNTRY) or the structure (25-place character sequence) that you would like to place on an axis.
AXIS **AXIS_N** 'X' = columns 'Y' = rows ' ' = free characteristics	**Axis on which the characteristic/structure is to be based** The characteristic or structure is based on the axis. The position on the axis is specified by the parameter 'Position'.
POSITION **POSITION_N**	**Position on an axis** By specifying the position, the characteristic or structure is set for this position on the axis. If the position is not specified or is set to '0', then the characteristic or structure is set at the end of the drilldown sequence.

Moving the key figure structure to the rows and removing the calendar year and planned/actual structure from the columns

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='SET_NAV_STATE' ALL='X'
IOBJNM_1='DTG057U7OQ8K2ALKCMR2AWM14' AXIS_1='Y' IOBJNM_2='0CALYEAR'
POSITION_2='1' AXIS_2='X' IOBJNM_3='EFG057U7OQ8K2JKKCMR2AWM67'
POSITION_3='2' AXIS_3='X'>
```

Ensuring that the cost centers (and not the materials) are in the drilldown for all query views

```
<SAP_BW_URL DATA_PROVIDER='*' MULTI='X' CMD='SET_NAV_STATE'
IOBJNM_1='0COSTCENTER' AXIS_1='Y' IOBJNM_2='0MATERIAL' AXIS_2=' '>
```

Sort

Definition

Sort is a command for a query view in the Web template.

Use

Depending on the parameterization, you use this command to sort characteristics or according to values.

Structure

CMD	**Sort**
Parameter	**Description**
SORT_TYPE 'K' = Key 'T' = Text 'H' = Hierarchy 'S' = Selection 'V' = Value	**Type of sort** Characteristics can be sorted according to key, name, hierarchy (if there is an active display hierarchy for the characteristic) or selection (if, in the query definition, there is more than one restricted single value or a query view is restricted dynamically). You can also sort according to values.
SORT_DIRECTION 'A' = Ascending 'D' = Descending	**Required sort direction** The sort direction for sort_type=H is always 'A'.
IOBJNM Only for sorting characteristics.	**Characteristic that you want to sort** This parameter is omitted when you are sorting according to values.
STRUCTURE_MEMBER_1 Only for sorting according to value.	**Component of the first structure** If you sort according to value, you have to specify the value cell exactly. To do this, you have to specify the components of the structure (25-character string) for all the occurring structures (maximum 2).
STRUCTURE_MEMBER_2 Only for sorting according to value.	**Component of the second structure** If two structures are defined in the query, you have to also determine the structural components of the second structure.

Sorting Customers in Query View1 According to Text, in Ascending Order

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='SORT' IOBJNM='0CUSTOMER'
SORT_TYPE='T' SORT_DIRECTION='A'>
```

Sorting List According to Actual Sales, in Descending Order

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='SORT' SORT_TYPE='V'
SORT_DIRECTION='D' STRUCTURE_MEMBER_1='DTG057U7OQ8K2ALKCMR2AWM14'
STRUCTURE_MEMBER_2='EFG057U7OQ8K2JKKCMR2AWM67'>
```

Setting Properties of Display Attributes

Definition

Instruction for a query view.

Use

You can change the properties of display attributes with this command.

Structure

CMD	**SET_ATTRIBUTE**
Parameter	**Description**
IOBJNM	**Name of characteristic** Specify the technical name of the characteristic (0COUNTRY, for example) to which the attribute belongs here.
ATTRINM	**Name of the attribute** Define the technical name of the display attribute here.
ACTIVE ‘X’ = Yes, ‘ ’ = No	**Display attribute**
POSITION	**Position of the attribute within the attribute**
PRESENTATION 'KEY' = key 'TEXT' = shortest text 'TEXT_MD' = middle-length text 'TEXT_LG' = long text 'KEY_TEXT' = key and text 'TEXT_KEY' = text and key	**Layout**

Results Row Position

Definition

Instruction for a query view.

Use

You can define the position of the results row with this command. Hierarchy nodes are also based on this setting if there are other objects with competing settings on the hierarchy axis.

Structure

Result position

CMD	**SET_RESULT_POSITION**
Parameter	**Description**
AXIS ‘X’ = columns ‘Y’ = rows	**Axis on which the result position should be set**
RESULT_POSITION 'TOP' = Top/left 'BOTTOM' = Bottom/right	**Result position**

Hierarchy Node Position

CMD	**SET_RESULT_POSITION**
Parameter	**Description**
IOBJNM	**Name of characteristic** Enter the technical name of the characteristic on which the hierarchy node position should be defined here.
RESULT_POSITION 'TOP' = Top (left) 'BOTTOM' = Bottom (right)	**Node position** The information in brackets represent what happens if the characteristic is on the columns.

Suppression of Result Rows

Definition

Instruction for a query view.

Use

You can suppress results row with this command.

Structure

CMD	SET_SUPPRESSION
Parameter	**Description**
IOBJNM	**Name of characteristic** Define the technical name of the characteristic (e.g. 0COUNTRY) here.
RESULT_SUPPRESSION 'NEVER' = No suppression 'CONDITIONAL' = Conditional suppression 'ALWAYS' = Always suppress	**Suppression method**

Define Display

Definition

Instruction for a query view.

Use

You can change the display of characteristics, hierarchy node types and attributes with this command.

Structure

CMD	**SET_PRESENTATION**
Parameter	**Description**
IOBJNM	**Name of characteristic** Define the technical name of the characteristic (e.g. 0COUNTRY) here.
NODE_IOBJNM (Option 1)	**Name of the node characteristic** With characteristic nodes and text nodes, you have to specify the characteristic name (0HIER_NODE).
ATTRINM (Option 2)	**Name of the attribute** Define the technical name of the display attribute here.
PRESENTATION 'NONE' = No display (only for characteristics) 'KEY' = key 'TEXT' = shortest text 'TEXT_MD' = middle-length text 'TEXT_LG' = long text 'KEY_TEXT' = key and text 'TEXT_KEY' = text and key	**Layout**

Calling Dialog *Characteristic Properties*

Definition

Instruction for a query view.

Use

You can call the *Characteristic Properties* dialog with this command.

Structure

CMD	**Process_help_window**
HELP_SERVICE	**CHAR_PROPERTIES**
Parameter	**Description**
IOBJNM	**Name of characteristic** Define the technical name of the characteristic (e.g. 0COUNTRY) here.

Currency Translation

Definition

Instruction for a query view.

Use

You can define a new currency translation for the query view with this command.

Structure

CMD	**CURRENCY_CONVERSION**
Parameter	**Description**
CUR_CONV_METHOD	**Currency translation type**
CUR_CONV_TYPE ‘0’ = database currency '1' = as in the query definition '2' = into target currency '3' = into target currency via definition currency	**Translation type**
TARGET_CURRENCY	**Target currency** Only need be specified for CUR_CONV_TYPE 2 and 3

Calling a Dialog for Currency Translation

Definition

Instruction for a query view.

Use

You can call the dialog for currency translation with this command.

Structure

CMD	**Process_help_window**
HELP_SERVICE	**CURRENCY_CONVERSION**

Defining and Changing Exceptions

Definition

Instruction for a query view.

Use

You can change existing (local) exceptions and define new (local) ones with this command.

Exceptions that were defined in the Query Designer cannot be changed.

Structure

CMD	SET_EXCEPTION
Parameter	**Description**
EXCEPTION_ID (optional)	**ID of the condition to be changed** If there is no exception with this ID, a new one is created. A new exception is also created if this parameter is not filled.
ACTIVE ‘X’ = Yes, ‘ ’ = No	**Exception active**
DESCRIPTION	**Description** This text is displayed in the list of exceptions.
IOBJNM_I	**Context in which a characteristic must be** The exception is only evaluated if the data cell for the given characteristic is in the context described by parameters OPERATOR and VALUE.
OPERATOR_I	**Context in which a characteristic must be** Valid operators are: 'AL' = No restrictions 'AG' = Aggregated (no filtering) 'EQ' = A certain value 'NA' = Restricted to a value 'HL' = Hierarchy level
VALUE_I	**Context in which a characteristic must be** Key of the characteristic value if operator 'EQ' and hierarchy level if operator 'HL'.

ALERT_LEVEL_J	**Alert Level** The alert level can have the values 1, 2 and 3 for good numbers, 4, 5 and 6 for critical numbers and 7, 8, and 9 for bad numbers.
OPERATOR_J	**Operator for the data values** 'EQ' = Equal to 'NE' = Not equal to 'BT' = Interval 'LE' : Less than or equal to 'LT' = Less than 'GE' : Greater than or equal to 'GT' = Greater than
VALUE_LOW_J	**Data cell value**
VALUE_HIGH_J	**Data cell value to** This parameter is only needed for interval operators.

Calling a Dialog for Defining Exceptions

Definition

Instruction for a query view.

Use

You can call the dialog for defining exceptions with this command.

Structure

CMD	**Process_help_window**
HELP_SERVICE	**EXCEPTION_DEFINITION**
Parameter	**Description**
EXCEPTION_ID	**Name of exception** Enter the technical name of the exception here if you want to change an existing exception. If no value is defined for this parameter, a new exception will be created.

Setting the Status of an Exception

Definition

Set the status of an exception is a command for a query view in the Web template.

Use

You call this command when you want to change the status of an exception in a query view.

Structure

CMD	**Set_Exception_State**
Parameter	**Description**
EXCEPTION_ID	**Technical name of the exception** Give the technical name of the exception here (25-place character sequence).
ACTIVE (Option 1) 'X' = activate, ' ' = deactivate	**Required exception status**
TOGGLE_STATE (Option 2) 'X' = switch, ' ' = do not switch	**Change the exception status** If this attribute is set to 'X', the exception is activated, if it is not active already, and deactivated, if it is active.

Examples

Set the exception "Problems in Sales" in Query View1 to active

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Set_Exception_State'
EXCEPTION_ID='DTG057U7OQ8K2ALKCMR2AWM14' ACTIVE='X'>
```

Change the exception "Problems in Sales" in Query View1

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Set_Exception_State'
EXCEPTION_ID='DTG057U7OQ8K2ALKCMR2AWM14' TOGGLE_STATE='X'>
```

Creating and Changing Conditions

Definition

Instruction for a query view.

Use

'You can change existing (local) conditions and define new (local) ones with this command.

Conditions that were defined in the Query Designer cannot be changed.

Structure

CMD	**SET_CONDITION**
Parameter	**Description**
CONDITION_ID (optional)	**ID of the condition to be changed** If there is no condition with this ID, a new condition is created. A new exception is also created if this parameter is not filled.
ACTIVE ‘X’ = Yes, ‘ ’ = No	**Condition active**
DESCRIPTION	**Description** This text is displayed in the list of conditions.
IOBJNM_I	**List of characteristics** List of the characteristics for which the condition should be applied in combination. If no characteristic is specified, the condition is applied to all characteristics.
STRUCTURE_MEMBER_1_I	**Component of the first structure** A condition always refers to exactly one value cell. To do this, you have to specify the components of the structure (25-character string) for all the occurring structures (maximum 2).
STRUCTURE_MEMBER_2_I	**Component of the second structure (if it exists)**

OPERATOR_I	**An operator** 'EQ' = Equal to 'NE' = Not equal to 'BT' = Interval 'LE' : Less than or equal to 'LT' = Less than 'GE' : Greater than or equal to 'GT' = Greater than 'TC' = Top n 'TP' = Top percent 'TS' = Top sum 'BC' = Bottom n 'BP' = Bottom percent 'BS' = Bottom sum
VALUE_LOW_I	**Numerical value for operator**
VALUE_HIGH_I	**Numerical value for operator** Only the interval operator needs this value.

Calling a Dialog for Defining Conditions

Definition

Instruction for a query view.

Use

You can call the dialog for defining conditions with this command.

Structure

CMD	**Process_help_window**
HELP_SERVICE	**CONDITION_DEFINITION**
Parameter	**Description**
CONDITION_ID	**Name of the condition** Enter the technical name of the condition here if you want to change an existing condition. If no value is defined for this parameter, a new condition will be created.

Setting the Status of a Condition

Definition

Set the status of an condition is a command for a query view in the Web template.

Use

You call this command when you want to change the status of a condition in a query view.

Structure

CMD	**Set_Condition_State**
Parameter	**Description**
CONDITION_ID	**Technical name of the condition** Give the technical name of the condition here (25-place character sequence).
ACTIVE (Option 1) 'X' = activate, ' ' = deactivate	**Required status for the condition**
TOGGLE_STATE (Option 2) 'X' = switch, ' ' = do not switch	**Change the status of the condition** If this attribute is set to 'X', the condition is activated, if it is not active already, and deactivated, if it is active.

Examples

Set the condition "Top 10 Customers" in query view1 to active

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Set_Condition_State'
CONDITION_ID='DTG057U7OQ8K2ALKCMR2AWM14' ACTIVE='X'>
```

Change the "Top 10 Customers" condition in query view1

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Set_Condition_State'
CONDITION_ID='DTG057U7OQ8K2ALKCMR2AWM14' TOGGLE_STATE='X'>
```

Displaying Documents

Definition

Instruction for a query view.

Use

You can call the document display for the selected context with this command.

Structure

You can access four different contexts:

CMD	**DOCUMENTS**
Parameter	**Description**
NAVIGATIONAL_STATE (Option 1) 'X' = Yes, ' ' = No	**Documents for the current navigation status**
DATA_ROW (Option 2)	**Documents for a data cell: Y coordinate** Coordinates in the data block
DATA_COLUMN (Option 2)	**Documents for a data cell: X coordinate** Coordinates in the data block
IOBJNM (Option 3)	**Documents for a characteristic**
IOBJNM (Option 4)	**Documents for a characteristic value: characteristic**
VALUE (Option 4)	**Documents for a characteristic value: key** Characteristic value in internal representation (without conversion exit)

Saving the Query View

Definition

Command for a query view.

Use

You use this command to save a query view as a reusable object.

Structure

CMD	**SAVE_VIEW**
Parameter	**Description**
TECH_NAME	**Technical name of the view**
DESCRIPTION	**Description**
OVERWRITE 'X' = Yes, ' ' = No	**Overwrite existing view**

Properties of Value Cells

Definition

Instruction for a query view.

Use

You can change the properties of value cells with this command.

Structure

CMD	**SET_VALUE_PROPERTIES**
Parameter	**Description**
STRUCTURE_MEMBER_1	**Component of the first structure** The properties are defined for a value cell. To do this, you have to specify the components of the structure (25-character string) for all the occurring structures (maximum 2).
STRUCTURE_MEMBER_2	**Component of the second structure (if it exists)**
SCALING_FACTOR	**Scaling factors** 0=No scaling, 1=Factor 10, 2=Factor 100, ...
DECIMAL_PLACES	**Number of displayed decimal places**
EMPHASIS ‘X’ = Yes, ‘ ’ = No	**Display with highlighting**

Calling a Dialog for Cell Properties

Definition

Instruction for a query view.

Use

You can call the dialog for cell properties with this command.

Structure

CMD	**Process_help_window**
HELP_SERVICE	**STRUC_MEMBER_PROPERTIES**
Parameter	**Description**
STRUCTURE_MEMBER_1	**Component of the first structure** Enter the value of the first structure component here. The combination of structure components defines the coordinates for a cell.
STRUCTURE_MEMBER_2	**Component of the second structure (if it exists)** Enter the value of the second structure component here. The combination of structure components defines the coordinates for a cell.

List Calculation

Definition

List calculation is a command for a query view in the Web template.

Use

With this command you can change the settings for calculating lists for a value cell.

Structure

CMD	**SET_LIST_CALCULATION**
Parameter	**Description**
STRUCTURE_MEMBER_1	**Component of the first structure** The value cell must be determined exactly for calculating lists. To do this, you have to specify the components of the structure (25-character string) for all the occurring structures (maximum 2).
STRUCTURE_MEMBER_2	**Component of the second structure (if it exists)**
APPLY_TO_RESULTS (optional) ‘X’ = Yes, ‘ ’ = No	**Use calculation guidelines also for event cells**
CUMULATION (optional) ‘X’ = Yes, ‘ ’ = No	**Cumulated output**
VALUE_CALCULATION (optional)	**Calculations** ' ' = No list calculation 'R' = Norming for query result 'G’ = Norming for overall result 'C' = Norming for result 'S' = Ranking list 'O' = Ranking list (olympic)

RESULT_CALCULATION (optional)	**Calculations for result cells** '00' = No list calculation '01' = Summation '02' = Maximum '03' = Minimum '04' = Count of all values '04' = Count of all values '06' = Average using all values '06' = Average using all values <> 0 '08' = Standard deviation '09' = Variance '10' = Hide results '11' = First value '12' = Last value

Example

Display maximum plan sales

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='SET_LIST_CALCULATION'
STRUCTURE_MEMBER_1='DTG057U7OQ8K2ALKCMR2AWM14'
STRUCTURE_MEMBER_2='EFG057U7OQ8K2JKKCMR2AWM67' VALUE_CALCULATION='02'>
```

See also:

OLAP Functions for Active Cells [Extern]

Operations for Display Hierarchies

Definition

Operations on Display Hierarchies contains commands for a query view in a Web template.

Use

There are four operations that you apply to display hierarchies:

1. With the **SET_HIERARCHY_STATE** command, you activate or deactivate a display hierarchy that has been assigned to a characteristic (for example, in the query definition or in a query view).

CMD	**SET_HIERARCHY_STATE**
Parameter	**Description**
IOBJNM	**Name of characteristic** Characteristic with a display hierarchy assigned to it already.
ACTIVE (Option 1) 'X' = activate, ' ' = deactivate	**Required status of the display hierarchy.**
TOGGLE_STATE (Option 2) 'X' = switch, ' ' = do not switch	**Switch the status of a hierarchy** If this attribute is set to 'X', the display hierarchy is activated, if it is not active already, and deactivated, if it is currently active.

Activating a Hierarchy for the Cost Center Characteristic for Query View1

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Set_Hierarchy_State'
IOBJNM='0COSTCENTER' ACTIVE='X'>
```

2. You use the **SET_HIERARCHY** command to assign a display hierarchy to a characteristic.

CMD	**SET_HIERARCHY**
Parameter	**Description**
IOBJNM	**Name of characteristic** Characteristic that you want to assign a display hierarchy to.
HIERARCHY_NAME	**Technical name of the hierarchy**
HIERARCHY_VERSION	**Hierarchy version** If the hierarchy has a particular version, you must specify the version. Otherwise you can leave out this parameter.

HIERARCHY_DATE	**Key date for the hierarchy** You specify the key date for time-dependent hierarchies here. The date must be formatted as YearMonthDay (for example, 20002412). If the parameter is not transferred, the key date in the query is copied.
ACTIVE 'X' = activate, ' ' = deactivate	**Required status of the display hierarchy.**

Assigning 'MyHierarchy' to the Cost Center Characteristic for Query View1

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Set_Hierarchy'
IOBJNM='0COSTCENTER' Hierarchie_Name='MyHierarchy' ACTIVE='X'>
```

3. You use the **DRILL_TO_LEVEL** command to expand the display hierarchy up to a specified hierarchy level.

CMD	**DRILL_TO_LEVEL**
Parameter	**Description**
IOBJNM	**Name of characteristic** Characteristic, to which an active display hierarchy is assigned.
LEVEL	**Hierarchy level** Level to which you want to expand the hierarchy. Level 1 is the root level. If a hierarchy node is filtered at the same time, make sure that the level is higher than the level of the filtered node.

Drilldown Cost Center Characteristic for Query View1 up to Level 3

```
<SAP_BW_URL DATA_PROVIDER='View1' CMD='Drill_To_Level'
Iobjnm='0COSTCENTER' Level='3'>
```

4. You use the **SET_DRILL_STATE** command you can expand and collapse a node from a display hierarchy.

Note that the node must be visible in the list in the current navigation status.

The command is a useful way of influencing the extent to which the hierarchy is expanded when you are calling a Web application, activating a hierarchy, or determining and activating a hierarchy. Command sequences are used to execute both commands at the same time.

CMD	**SET_DRILL_STATE**

Parameter	Description
IOBJNM	**Name of characteristic** Characteristic, to which an active display hierarchy is assigned.
POSITION	**Data position in the drilldown** Since several objects can be drilled down on an axis, the node specifications are no longer unique. Therefore, the axis position is used instead. For example, the fifth data line.
DRILL_STATE	**Level to which you want the hierarchy to be expanded** 'E' = hierarchy nodes expanded 'C' = collapse 'U' = by activating “Display as Hierarchy” on the axis: drilldown according to the next object on the axis

Specifying the Hierarchy for the Cost Center Characteristic for Query View1 and Simultaneously Expanding the Fifth Node on the Axis

<SAP_BW_URL DATA_PROVIDER='View1' CMD='Set_Hierarchy' IOBJNM='0COSTCENTER' Hierarchie_Name='MyHierarchy' ACTIVE='X' CMD_1='CMD=set_Drill_State&Data_Provider=View1&iobjnm=0COSTCENTER&POSITION=5&Drill_State=E'>

A command sequence is used in this example.

See also:

Command Sequences [Seite 261]

Calling Up Dialog Box for Formula Definition

Definition

Command for a query view.

Use

You can use this command to call up a dialog box for defining a new or an existing formula.

Structure

CMD	Process_help_window
HELP_SERVICE	**DP_VIEW_SET_CALC_MEMBER**
SUBCMD	**NEW**
Parameter	**Description**
FORMULA_STRUCTURE	**Technical name of structure**

CMD	Process_help_window
HELP_SERVICE	**DP_VIEW_SET_CALC_MEMBER**
SUBCMD	**CHANGE**
Parameter	**Description**
FORMULA_ID	**Technical name of formula**

Goto using Report/Report Interface.

Definition

Command for a query view.

Use

You can use this command to execute a report to report jump. You can jump from one Web template to another Web template, to another query, or to a transaction in a R/3 system and much more.

Structure

CMD	**RRI**
Parameter	**Description**
RRI_RECEIVER	**RRI Recipient ID**
DATA_ROW **(optional)**	**Data row** Context from which jump is made
DATA_COLUMN **(optional)**	**Data column** Context from which jump is made
IOBJNM **(optional)**	**a characteristic** Context from which jump is made

Example

Jump to XYZ

<SAP_BW_URL DATA_PROVIDER='View1' CMD='RRI' RRI_RECEIVER='XYZ'>

See also:

Overview: Report-Report-Interface [Extern]

Defining Sender/Receiver Assignment to the R/RI in BW [Extern]

Exporting Data

Definition

Instruction for a query view.

Use

You can export the data of a query view to a CSV or MS Excel 2000 file with this instruction.

Structure

CMD	**EXPORT**
Parameter	**Description**
FORMAT	**Format** 'CSV' = CSV file 'XLS' = MS Excel 2000 file

Example

Exporting data to MS Excel 2000

<SAP_BW_URL DATA_PROVIDER='View1' CMD='EXPORT' FORMAT='XLS'>

Use of JavaScript Functions

Use

You can execute commands or command sequences with JavaScript as well as by using <SAP_BW_URL> tags.

Another JavaScript application is the enhancement of the context menu to include customer-specific entries.

All subsequent examples refer to JavaScript excerpts.

Functions

You can choose from the following functions:

Sending Instructions [Seite 319]

Enhancing the Context Menu with JavaScript [Seite 326]

Logon Language [Seite 337]

Sending Instructions

Use

You must create an URL before you can send it. The following options are available:

- Use of the <SAP_BW_URL> tag
- Use of BW JavaScript function SAP_BW_URL_GET(). This returns the same as the <SAP_BW_URL>tag, but can be called from outside its own frame.

Functions

JavaScript Function	SAP_BW_URL_GET
Return value	Start of an URL for calling an instruction that should be executed in the same page context.

Prepare Bookmark URL

var = "<SAP_BW_URL CMD='BOOKMARK'>";

gives you the same as

var = "<SAP_BW_URL>" + "&CMD=BOOKMARK";

or

var = SAP_BW_URL_GET() + "&CMD=BOOKMARK";

There are a number of JavaScript functions for sending instructions. Functions that simplify the management of windows and that permit you to call for example property dialogs in separate windows are provided. These functions take into consideration whether or not the Web browser should use JavaScript. No new windows are created for example for a pocket IE device.

You can choose from the following JavaScript functions:

Execute URL in the Same Window [Seite 320]

Execute URL in a New Window [Seite 321]

URL from a New Window in the Opening Window [Seite 322]

Close Window [Seite 323]

Execute Form in a New Window [Seite 324]

Execute Form in the Opening Window [Seite 325]

Execute URL in the Same Window

Use

JavaScript function for sending commands.

Functions

JavaScript Function	SAPBWOpenURL
Parameter	**Description**
url	**URL to be started.**

Example

Send Bookmark URL

SAPBWOpenURL(SAP_BW_URL_GET() + "&CMD=BOOKMARK");

or in HTML:

Create bookmark

Open SAP Portals Homepage

SAPBWOpenURL("http://www.sapportals.com");

Executing an URL in a New Window

Use

JavaScript function for sending commands.

Functions

The URL is executed in a new window (if the output device permits this). This is advantageous for example for selecting filter values and for the properties dialogs.

JavaScript Function	**SAPBWOpenWindow**
Parameter	**Description**
url	**URL to be started.**
Name	**Window name**
Width	**Width of the window**
Height	**Height of the window**

Example

Call *Select filter value* dialog for characteristic 0Costcenter of Data Provider ABC

SAPBWOpenWindow(SAP_BW_URL_GET() + "&CMD=PROCESS_HELP_WINDOW&HELP_SERVICE=DP_VIEW_FILTER&DATA_PROVIDER=ABC&IOBJNM=0COSTCENTER","FILTER",800,600);

or in HTML:

Define filter value for cost center

Display self-made form in a new window

SAPBWOpenWindow("http://.../CustomerForm.htm","CONFIG",300,200);

Open SAP Portals homepage in a new window

SAPBWOpenWindow("http://www.sapportals.com","SAPPORTALS",800,600);

URL from a New Window in the Opening Window

Use

JavaScript function for sending commands.

Functions

You can send an URL on the opening window from a new window with this function. The properties of the output device are taken into consideration.

JavaScript Function	**SAPBWSetOpenerUrl**
Parameter	**Description**
url	**URL to be started in the opener window.**
close true = close, false = leave open	**Then close window**

Example

Start a new Web application in the main window

SAPBWSetOpenerUrl(SAP_BW_URL_GET() + "&CMD=LDOC&TEMPLATE_ID=NewTemplate");

or in HTML:

New Web report

Closing Windows

Use

JavaScript function for sending commands.

Functions

With this function you can close a window without having to execute a command.

The properties of the output device are taken into consideration. If the output device does not accept JavaScript, the function pages back by one page.

JavaScript Function	**SAPBWCloseWindow**

Example

Close window

SAPBWCloseWindow();

or in HTML:

```
<a href="JavaScript:SAPBWCloseWindow();">Close window</a>
```

Executing a Form in a New Window

Use

JavaScript function for sending commands.

Functions

The form is executed in a new window (if the output device permits this). You can use this function to create your own forms for control in a Web template.

JavaScript Function	**SAPBWWForm**
Parameter	**Description**
name	**Window name**
formname	**Name of form**
width	**Width of the window**
height	**Height of the window**

Example

Execute a Form in a New Window

SAPBWWForm("WindowName","FormName",800,600);

or in HTML:

Evaluate form in a new window

Executing a Form in the Opening Window

Use

JavaScript function for sending commands.

Functions

You can execute a form on the opening window from a new window with this function.

The properties of the output device are taken into consideration.

JavaScript Function	SAPBWOpenerSubmitForm
Parameter	**Description**
formname	**Name of form**
close true = close, false = leave open	**Then close window**

Example

Execute form in the opening window and close window

SAPBWOpenerSubmitForm("FormName",true);

or in HTML:

Execute form and close window

Enhancing the Context Menu with JavaScript

Use

As well as being able to make entries in the context menu visible, entries in the enhanced menu visible or entries in the enhanced menu invisible, you can also hang scenario-specific entries in the menu. There are several options:

- You define the new entries for the Web template properties with the object tag. For more information see Object Tag for the Properties of Web Templates [Seite 228]
- You hang the new entries in the context menu with a JavaScript function. You can find more detailed information under:

  Adding a Menu Entry with JavaScript [Seite 327]

  Command Processing [Seite 329]

  In both cases you must write a JavaScript function that processes the menu entry selection.

Adding a Menu Entry using JavaScript

Use

You can add new entries to the context menu either using the Web template property or with a JavaScript call.

Functions

JavaScript Function	**SAPBWAddToMenu**
Parameter	**Description**
label	**Labeling text in the menu**
func	**JavaScript function for processing the command** You implement this function in JavaScript and use it to execute commands after you have selected the menu entry.
parameter	**Free parameter** This parameter is passed to the JavaScript function ‘func’ and you can evaluate it there as required. The parameter allows you to use a function ‘func’ for more than one menu entry.
cell_type ‘ ’ = No restriction ‘CHARACTERISTIC’ = Characteristic ‘CHARACTERISTIC_VALUE’ = Characteristic value ‘STRUCTURE’ = Structure ‘STRUCTURE_MEMBER = Structural component ‘DATA’ = Data cell ‘EXCEPTIONS’ = Exceptions item ‘CONDITIONS’ = Conditions item ‘DOCUMENT_LIST’ = Document list item	**Context of the entry** If you want the menu entry to appear only in certain contexts and not in all context menus, you can define this with ‘cell_type’ and ‘filter’.

filter	**Context of the entry** Different values are relevant here, depending on the value of ‘cell_type’: ‘CHARACTERISTIC’, ‘CHARACTERISTIC_VALUE’, ‘STRUCTURE’, ‘STRUCTURE_VALUE’: Iobjnm ‘EXCEPTIONS’: Exception ID ‘CONDITIONS’: Condition ID ‘DOCUMENT_LIST’: Document ID See *Examples*.
visibility ‘ ’= Not displayed ‘X’= Displayed in the “basic menu” ‘E’= Displayed in the “enhanced menu”	**Visibility of the entry** Here you define if the entry is to appear in the *basic menu* or in the *enhanced menu*.
position ‘TOP’ = Before the “normal” entries ‘BOTTOM’ = After the “normal” entries	**Position of the entry** The entries are inserted in the order in which they were called. You can choose if the entry is to appear before the “normal” entries or after them in the menu. You cannot position the entries in between the “normal” entries.
Data_provider	**Name of the data provider** Name of the data provider (if the entry is to be made only for a specific data provider).
Item	**Name of the Web item** Name of the Web item (if the entry is to be made only for a specific Web item).

Example

See the examples under Command Processing [Seite 329]

Command Processing

Use

When you enhance the context menu with customer-specific entries (with Web template properties or JavaScript function 'SAPBWAddToMenu'), you must define a JavaScript function that is executed when a customer-specific entry is selected. This function is responsible for processing the command.

Functions

The function must support the following interface:

JavaScript Function	**JavaScript function for processing the command**
Parameter	**Description**
parameter	**Free parameter** The parameter makes it possible to process more than one menu entry with one function. See *Examples*.
cell_type ' ' = No special ‘CHARACTERISTIC’ = Characteristic ‘CHARACTERISTIC_VALUE’ = Characteristic value ‘STRUCTURE’ = Structure ‘STRUCTURE_VALUE’ = Structure component value ‘DATA’ = Data cell 'EXCEPTIONS' = Web Item *List of Exceptions* 'CONDITIONS' = Web Item *List of Conditions* 'DOCUMENT_LIST' = Web Item *List of Documents*	**Context of cell**
Filters	**Context of cell** Different values makes sense here, depending on the value of ‘cell_type’: ‘CHARACTERISTIC’, ‘CHARACTERISTIC_VALUE’, ‘STRUCTURE’, ‘STRUCTURE_VALUE’: Iobjnm ‘EXCEPTIONS’: Exception ID ‘CONDITIONS’: Condition ID ‘DOCUMENT_LIST’: Document ID See *Examples*.

parameter1	**Exact definition of the context of the cell** cell_type = 'CHARACTERISTIC_VALUE': Key of characteristic value cell_type = 'STRUCTURE_VALUE': STRUCTURE_MEMBER_ID_1
parameter2	**Exact definition of the context of the cell** cell_type = 'CHARACTERISTIC_VALUE': Node type for a hierarchy node cell_type = 'STRUCTURE_VALUE': STRUCTURE_MEMBER_ID_2
item	**Name of the Web item on which the menu is called**
dataprovider	**Name of the Data Provider on which the menu is called**
x	**Cell is on data column x** This parameter is needed especially for the report/report interface.
Y	**Cell is on data row y** This parameter is needed especially for the report/report interface.

You can use all the JavaScript functions that were listed for processing.

Example

```
<SCRIPT language="JavaScript">
<!--

// menu entry at start and only for customer cells, only for data provider DP1

SAPBWAddToMenu("Customer
details","myMenuProcessor","1","CHARACTERISTIC_VALUE","0CUSTOMER","X","TOP","DP1","");

// Menu entry at the end to the IT Home Page

// Menu entry at the end to the IT Home Page

// Menu entry at the beginning and only on material groups

SAPBWAddToMenu("Materials","myMenuProcessor","3","CHARACTERISTIC_VALUE","0MATERIAL","X"
,"TOP","","","");

// Command Processing

function myMenuProcessor(parameter,cell_type,filter,parameter1,parameter2,item,dataprovider,x,y){
  switch (parameter){
    case "1":

//    Report-report-interface jump to customer details Web application in a new window

      SAPBWOpenWindow(SAP_BW_URL_Get() + "&CMD=RRI&DATA_ROW=" + y +
"&DATA_COLUMN="
      + y + "&IOBJNM=0CUSTOMER&RRI_RECEIVER=ABC","CustDetails",600,400);
      break;
    case "2":
```

```
// Call IT help page
      SAPBWOpenWindow("http://…/it/olap/help.htm","Help",600,400);
      break;
    case "3":
// Filter material group and expand by material
      SAPBWOpenUrl(SAP_BW_URL_Get() + "&CMD=EXPAND&" +
      "DATA_PROVIDER=" + escape(dataprovider) +
      "&IOBJNM=0MATERIAL&IOBJNM_PARENT=0MATGROUP&FILTER_IOBJNM=0MATGROUP" +
      "&FILTER_VALUE=" + escape(parameter1) + "&FILTER_NODE_IOBJNM=" + escape(parameter2));
      break;
  }
}
--->
</SCRIPT>
```

Properties of Page Objects

Use

This section lists the JavaScript functions for the properties of Web items and query views:

- You can access the current attribute value of a Web item. See Web Item Attributes [Seite 333]
- You can determine which characteristics a data provider has. See Information on the Navigation Status [Seite 367]

Web Item Attributes

Use

You can access the current attribute values of a Web item using this JavaScript function. For example, you can specify whether a Web item is visible. This will help you to create a Web application in which you can switch between two views, for example between a chart and a table, using a link.

Features

JavaScript Function	SAPBWGetItemProp
Parameter	**Description**
Name	**Logical name of the Web item**
Return value	**Array with Web item properties** The information is stored as follows: new Array(itemName, new Array(attributeName1,attributeValue1), new Array(attributeName2,attributeValue2), ...)

Specifying whether a Web item is visible:

```
<SCRIPT language="JavaScript">
<!--
var prop = SAPBWGetItemProp("myItem");
var hidden = true;
if (prop != null){
  for(i=1;i<prop.length;i++){
    if (prop[i][0] == "HIDDEN")  hidden = (prop[i][1] == "X");
  }
}
--->
</SCRIPT>
```

Characteristics of a Saved Query View

Use

You can use this JavaScript function to determine which characteristics belong to a data provider. By doing this you can then, for example, fill a dropdown box for changing drilldowns with the relevant characteristics and do not have to create a dropdown box manually for each query view.

Moreover, this function is language-independent which means the selections are adjusted automatically for each language. The texts are shown according to the logon language.

Functions

JavaScript Function	SAPBWGetDataProviderDimensions
Parameter	**Description**
Name	**Logical name of the saved query view**
Return value	**Array of characteristics and structures of the data provider** The individual characteristics and structures are stored as arrays, as in the example: new Array(dimArray1, dimArray2, ...) The individual characteristics and structures have the following structure: new Array(iobjnm,is_structure (,X),hierarchyAssigned(,X), activeHierarchy(,X), axis (X,Y,), filtered (,1 (single value), X(multiple filter values)), caption, unsupported properties) There are other properties in addition to those listed, but these have not yet been officially released.

Listing characteristics and structures:

```
<SCRIPT language="JavaScript">
<!--
var dim = SAPBWGetDataProviderDimensions("myDataProvider");
var text = "";
if (dim != null){
  for(i=0;i<dim.length;i++){
    text = text + dim[i][6] + ", ";
  }
  alert(text);
}
```

```
--->
</SCRIPT>
```

Calendar for Date Filter

Use

You can use this JavaScript function to call up a calendar. When you select a value, the system filters the data characteristic for the specified DataProvider.

Funktionsumfang

JavaScript Function	SAPBWSetFilterByCalendar
Parameter	**Description**
dataProvider	**Logical name of the DataProvider** When the filter operation is only to be applied to a DataProvider, specify its logical name here.
dataProviderArray	**Logical name of DataProvider** When the filter operation is to be applied to several DataProviders, specify their logical names here, for example, new Array (“DP1“,“DP2“,“DP3“)
iobjnm	**Date characteristic** The system is to filter according to this characteristic.
displayDate (optional)	**Start date** **Date the calendar displays when it appears. This parameter is optional. The date format has 4 characters for the year, 2 for the month and 2 characters for the day: YYYYMMDD**

Filter DP1 according to 0CALDAY

Filter Calday

Logon Language

Use

With this function you can define the logon language and thereby take the different input formats of the various languages into consideration in JavaScript.

Functions

JavaScript Function	**SAP_BW_Get_Language**
Return value	**Logon Language** e.g. EN for English and DE for German.

Web Design API for Tables

Purpose

The Web Design Application Programming Interface (Web Design API) is aimed at Web designers and ABAP programmers that want to create Web applications for highly individual scenarios, such as BI cockpits, based on BEx Web application design and want to change the display of tables or navigation blocks to meet their own requirements.

The Web Design API enables you to modify individual cell data (characteristic values, column headers, value cells, and so on) with relation to content, display and navigation options.

Process

1. Using the Class Builder (transaction SE24) or the Object Navigator (transaction SE80), create a class with a class name in the customer name space.
2. Give the class the same properties as class CL_RSR_WWW_MODIFY_TABLE.
3. Implement only the methods that fill cell contents that you want to change. For further information about the different methods, see Table Interfaces [Seite 339].
4. Create the your Web template from the table provided by SAP.
5. Extend the object tag of the table and/or the navigation block in the Web template with the parameter <param name='MODIFY_CLASS' value='YourClassName'>.
6. Check in the modified Web template.

Result

The next time you call up the Web template, your class for adjusting the table contents is called up.

We recommend that you test this in transaction RSRT2. Select the HTML checkbox and enter the contents of the start URL from CMD=LDOC as the URL.

You can now test the HTML generation in the Debugger. Simply set suitable breakpoints and restart the transaction.

Table Interface

Definition

This enables you to display tables or navigation blocks in BEx Web applications as you choose.

Use

The range of options reaches from simply changing the display to enhancing the navigation options and display specifically for data.

You use ABAP-OO to execute the technical implementation.

- You create an ABAP-OO class.
- This class must succeed from the class CL_RSR_WWW_MODIFY_TABLE.
- The class name of the appropriate class is specified in the object tag of the Web item *Table* or the Web item *Generic Navigation Block* in the Web template in the following form:

```
<object>
…
<param name="MODIFY_CLASS" value="YourClassName">
…
</object>
```

Structure

In the following, different methods are executed with which you can modify cell contents. All methods receive the contents which are suggested as standard in BEx Web Applications as “CHANGING” parameters. These can be redefined in the implementation of the table interface methods. If individual cell types remain unchanged, leave the implementation empty.

The table interface has the following functions:

- Attributes [Seite 340]
- Events [Seite 350]
- Methods for Manipulating Cell Contents [Seite 351]
- Service Methods [Seite 365]

Attributes

Definition

Functional components of the table interface.

Structure

The following instance attributes of the class are filled automatically. They get their values from the Web application framework.

The attributes are read-only.

Attribute	Description
N_ITEM_NAME	**Logical name of the table** This attribute is needed for command URLs. You can use this attribute, for example, to change attributes in the table.
N_GENERATE_LINKS	**Generate navigation links** If the value = “X”, URLs can be generated. If the value is blank, the item is for display only. It is not possible to interact with the item.
N_ALT_STYLES	**Display zebra list** If the value = “X”, the formatting is the same in every other row.
N_STATELESS	**Calling the Web application without interaction** If the value = “X”, the Web application is called and the session is dismantled on the application server. SAP BW 2.0 supports no further interaction.

N_R_CREATION_PARAMETERS	**Creation parameters for the table** Using the reference for an instance of the class CL_RSR_PARAMETER, the system is able to read the value-name pairs that have been used in the generation of the table. Methods such as GET are used to read the values. The parameters of the start URL and the name-value pairs specified in the object tag of the item in the Web template belong to these name-value pairs. This means that the start URL or object tag (in the Web template) can transfer parameters to the class. This increases the number of times a class can be reused and the different areas where the class can be used, for example, by using customer-specific parameters that configure the class individually.
N_JAVASCRIPT	**Using Java Script** If the value = “X”, Java Script functions are supported. Otherwise, you must not use Java Script functions, since you cannot be sure that the requesting Web browser supports Java Script.
N_DATA_PROVIDER_NAME	**Logical name of the data provider** Needed in the generation of navigation URLs.
N_NO_DATA	**No relevant data found**
N_NO_AUTHORIZATION	**No authorization for displaying data**
N_R_DATA_SET	**Data in the data provider** This attribute is needed only for special applications. As a rule, the information that is transferred by the method interfaces is enough to determine the cell contents. For more information see Datasets [Seite 342].

Datasets

Definition

The dataset contains the data for the query view.

Use

Special applications require information that cannot be obtained using the method interfaces. For some applications you need more information than is contained in the cell contents. For example, you need the list of available characteristics or the contents of the dynamic filter before you are able to jump from one report into another.

An understanding of the enhancement described below is not necessary for the use of the table interface.

You have made sure that the data from the dataset (N_R_DATA_SET) is always up to date. The N_SX_VERSION_20A_1 attribute, type RSRDS_SX_DATA_SET_20A_1, is filled automatically. The data consists of both the metadata (a catalog of characteristics (AXIS_INFO) and so on) and the displayed values (AXIS_DATA and CELL_DATA).

Structure

The instance attribute N_R_DATA_SET → N_SX_VERSION_20A_1 has the following components:

Component	Description
AXIS_INFO [Seite 343]	Metadata description of the characteristics, attributes, and structures on the axes.
AXIS_DATA [Seite 345]	Characteristic values, attribute values, and structural components according to the sequence they appear in on the axes.
CELL_DATA [Seite 347]	Value cells: The cells are arranged by row first, and then by column.
TXT_SYMBOLS [Seite 349]	Text elements for the query

AXIS_INFO

Definition

This component describes the properties of the structures, characteristics, and attributes, and how they are distributed between the axes.

Structure

The AXIS_INFO is a table of axes (rows, columns, and filters) with the appropriate axes components.

AXIS_INFO	**Description**
AXIS	**Axis ID** 0 : Columns 1 : Rows 255 : Filters
NCHARS	**Value cells** The cells are arranged by row first, and then by column.
NCOORDS	**Number of objects on the axis** (number of rows / columns / filter values)
CHARS	**Characteristics with their attributes and structures on the axis.**

The complex table CHARS has the following structure:

CHARS	**Description**
CHANM	Name of the characteristic or of the structure
HIENM	**Hierarchy name**, if the hierarchy is active
VERSION	**Hierarchy version**
DATETO	**Key date for the hierarchy**
CAPTION	**Name of the characteristic or of the structure**
CHAPRSNT	**Characteristic display** 0 : key and text 1 : Text 2 : Key 3 : Text and key 4 : Long text 5 : Medium text 6 : No display
ATTRINM	**Attributes for this characteristic**

ATTRINM is a table of the attributes for the characteristic. It has the following structure:

ATTRINM	**Description**
ATTRINM	**Name of the attribute**
CAPTION	**Name of the attribute**
CHAPRSNT	**Attribute display** 0 : key and text 1 : Text 2 : Key 3 : Text and key 4 : Long text 5 : Medium text

AXIS_DATA

Definition

The component AXIS_DATA describes the contents of the axis.

Structure

AXIS_DATA is a table with the following structure:

AXIS_DATA	Description
AXIS	**Axis ID** 0 : Columns 1 : Rows 255 : Filters
SET	**Axis contents**

The complex table SET has the following structure:

SET	Description
TUPLE_ORDINAL	**Number of the entry beginning with 0 on the axis**
CHANM	**Name of the characteristic or of the structure**
CAPTION	**Text for the characteristic value**
CHAVL	**Internal key value for the characteristic value** This is needed, for example, for the filter operations.
CHAVL_EXT	**External key value for the characteristic value** This corresponds with CHAVL after the application of the conversion exit.
NIOBJNM	With hierarchy nodes, this is the **name of the node characteristic** (0HIERNODE for text nodes).
TLEVEL	**Hierarchy level of the entry**
DRILLSTATE	**Extent to which the entry is expanded (for an active hierarchy).** L : Hierarchy leaf - : Expanded node + : Collapsed node

OPT	Only with filters: EQ : Single value LT : Less than LE : Less than or equal to GT : Greater than GE : Greater than or equal to BL : From-value with intervals (two rows) BH : To-value with intervals
SIGN	I : Include E : Exclude
ATTRIBUTES	**Attribute values**

ATTRIBUTES is a table with the following structure:

ATTRIBUTES	**Description**
ATTRINM	**Name of the attribute**
CAPTION	**Text for an attribute value**
ATTRIVL	**Key for the attribute value**

This describes the contents of an axis.

CELL_DATA

Definition

The CELL_DATA component describes the value cells.

The number cells of the query view are given as the assigned table of rows for BAPI type BAPI6111CD. If you display the query view data as a table, the assignment of cells corresponds to that of the data block, in which the assignment is run first using the rows and then using the columns.

The index of a specific value is therefore calculated as follows:

Index = Column position + (row position – 1)* number of columns

Structure

The data structure is as follows:

Component	Description
CELL_ORDINAL	**Numbering of the values begins with 0** CELL_ORDINAL is always smaller by 1 than the index of the rows
VALUE	**Value**
FORMATTED_VALUE	Formatted value Unit and currency are used already in this field
VALUE_TYPE	**Value type** The value type accepts the following values: ‘ ’ normal, valid value ‘0’ division by 0 ‘1’ value cannot be determined ‘3’ value constructed from different currencies ‘5’ zero value ‘9’ surplus ‘D’ date ‘T’ time ‘A’ no authorization for this value
CURRENCY	**Currency identifier**
UNIT	**Unit identifier**

MWKZ	**Amount/value key figure** The amount/value key figure accepts the following values: 'W' value ‘M’ amount ‘P’ price ‘Q’ ratio ‘%’ percentage value ‘C’ counter ‘F’ real number ‘D’ date ‘T’ time
NUM_SCALE	Scaling factors 0 for 1, 1 for 10, 2 for 100, 3 for 1000, ...
NUM_PREC	**Precision of the number in decimal places**
CELL_STATUS	Not used
BACK_COLOR	Not used

TXT_SYMBOLS

Definition

The component TXT_SYMBOLS describes the text elements of the query. The text elements are available as a table made up of RRX_TXT_SYMBOLS rows.

Structure

The text elements have the following structure (only the most important components):

Component	Description
SYM_TYPE	**Type of text element** 'V' for variable 'F' for filter value 'C' for general text element
SYM_NAME	**Name of the object** With variables this is the variable name, with filters it is the filter characteristic, and with general text elements it is the name of the element. A list of the names of the general text elements is stored under Text Elements [Seite 161].
SYM_FS	Follow-on record number A text element can be distributed over several rows, for example, in intervals. This field gives you the row number of a component within a text element. If SYM_FS=0, the text element is a new text element.
SYM_BEGIN_GROUP	**New group within a text element** Groups are usually separated by semicolons (;)
SYM_CAPTION	**Name of the text element**
SYM_VALUE	**Value of the component of the text element**

Events

Definition

Functional components of the table interface.

Use

Events allow you to initialize tables.

Structure

Initialization

Initializing a table: You call this method is before processing. Using the reference from the dataset, you can analyze metadata for the navigational state as well as the data itself. All attributes of the class that were listed beforehand are filled at this point.

Method	**Start**

New Rows

You call the following method before starting a new row. You can execute a suitable initialization for the rows.

Method	**New_Row**
Importing Parameter	**Description**
I_Y	**New row numbers**

Header Completed

The following method is called after you have processed the table header. You can execute a suitable initialization for the rows.

Method	**Header_Finished**
Importing Parameter	**Description**
I_Y	**New row numbers**

Completion

This method gives you the option of carrying out further operations after you have finished the table. For example, setting Java Script functions using the method “Set_Javascript_Function” (see Service Methods [Seite 365]) or cleaning up the table.

Method	**Finished**

Manipulating Cell Contents

Definition

Functional components of the table interface.

Use

You can use a set of methods to manipulate cell contents.

Only implement the methods for the cell types that you want to manipulate.

Standard contents will be used for all other cell types.

Standard contents may change between releases/support packages. If you want to change the contents of a cell, we recommend that you overwrite the contents of, for example, C_CELL_CONTENT completely and do not process the field with REPLACE or a similar operation.

Functions

You can use the following methods to manipulate cell contents:

- **Caption_Cell**: Headers [Seite 353]
- **Scaling_Factor_Cell**: Scaling Factors [Seite 354]
- **Characteristic_Cell**: Characteristic Values [Seite 355]
- **Attribute_Cell**: Attribute Values [Seite 357]
- **Structure_Cell**: Structural Components [Seite 358]
- **Data_Cell**: Data Cells [Seite 359]
- **Error_Cell**: Error Cells [Seite 360]
- **NAV_BLOCK_LABEL**: Label Area of Navigation Block [Seite 361]
- **NAV_BLOCK_VALUE**: Filter of Navigation Block [Seite 363]

All methods have i**mporting parameters** that describe the context of the cell.

All methods have the same **changing parameters**. These parameters provide the default values and can be changed in the method. As these parameters are method-independent, they are listed only once here.

Changing Parameter	Description
C_CELL_ID	**Cell ID** If you leave this parameter empty, the cell has no ID. The ID is used to process the cell contents with JavaScript.

C_CELL_CONTENT	**Cell Contents** The cell contents themselves can be very simple (for example, a number) or very complex (for example, for hierarchy nodes: icons with expanded/collapsed URL and text).
C_CELL_STYLE	**Style of Cell** The style defines the color, font, font size, spacing, etc. of the cell. The styles are defined in the Cascading Style Sheet. The Cascading Style Sheet is assigned to the Web template.
C_CELL_TD_EXTEND	**Extension of TD tag** Here you can set the properties such as the width, height, alignment or color of the cell. This parameter is not normally set because many of the properties are already defined when the style is defined.

Headers

Definition

You use the **Caption_Cell** method to adjust the contents of header cells.

Structure

Method	**Caption_Cell**
Importing Parameter	**Description**
I_X	**X coordinate of the cell in the table**
I_Y	**Y coordinate of the cell in the table**
I_IS_EMPTY	**Cell is empty** 'X' = empty
I_IOBJNM_ROW	**Characteristic in the rows** In the rows axis, the characteristic, whose header you want to display in the cell.
I_ATTRINM_ROW	**Attribute for characteristic in the rows** In the rows axis, the attribute for the characteristic, whose header you want to display in the cell.
I_TEXT_ROW	**Text for characteristic / attribute**
I_IOBJNM_COLUMN	**Characteristic in the columns** In the columns axis, the characteristic, whose header you want to display in the cell.
I_ATTRINM_COLUMN	**Attribute for characteristic in the columns** In the columns axis, the attribute for the characteristic, whose header you want to display in the cell.
I_TEXT_COLUMN	**Text for characteristic / attribute**
I_ROWSPAN	**Number of cells that you want to merge along the rows axis**
I_COLSPAN	**Number of cells that you want to merge along the columns axis**
I_IS_REPETITION	**Repetition** 'X' = cell contents is a repetition

Scaling Factors

Definition

You use the **Scaling_Factor_Cell** method to adjust the contents of cells that display the scaling factors.

Structure

Method	**Scaling_Factor_Cell**
Importing Parameter	**Description**
I_X	**X coordinate of the cell in the table**
I_Y	**Y coordinate of the cell in the table**
I_TEXT	**Scaling text**
I_IS_SUM	**Sum total cell** 'X' = sum total cell
I_NUM_SCALE	**Scaling factor**
I_CURRENCY	**Currency**
I_UNIT	**Unit**

Characteristic Values

Definition

You use the **Characteristic_Cell** method to adjust the contents of cells containing values for characteristics.

Structure

Method	**Characteristic_Cell**
Importing Parameter	**Description**
I_X	**X coordinate of the cell in the table**
I_Y	**Y coordinate of the cell in the table**
I_IOBJNM	**Name of characteristic**
I_AXIS	**Axis on which the characteristics are arranged in the drilldown** 'X' = columns, 'Y' = rows
I_CHAVL_EXT	**Characteristic value in external display** Key value of the characteristic value according to its application in the conversion exit.
I_CHAVL	**Characteristic value in internal display** Key value of the characteristic value. This is needed for the filter operations.
I_NODE_IOBJNM	**Name of the node characteristic** With characteristic nodes and text nodes, you have to specify the characteristic name (0HIER_NODE).
I_TEXT	**Text for characteristic value**
I_HRY_ACTIVE	**Status of the display hierarchy** ‘X’ = active
I_DRILLSTATE	**Extent to which the node is expanded** 'E' = expanded, 'C' = collapsed
I_DISPLAY_LEVEL	**Display hierarchy level of the node / leaf**
I_USE_TEXT	**Cell contents** 'X' = text, ' ' = key
I_IS_SUM	**Sum total cell** ‘X’ = sum total cell
I_IS_REPETITION	**Repetition** 'X' = cell contents is a repetition
I_FIRST_CELL	**First data cell of the characteristic value**

I_LAST_CELL	**Last data cell of the characteristic value**
I_CELLSPAN	**Number of cells that you want to merge along the drilldown axis**
I_CELLSPAN_ORT	**Number of cells that you want to merge vertically along the drilldown axis**

Attribute Values

Definition

You use the **Attribute_Cell** method to adjust the contents of the cells containing attribute values.

Structure

Method	**Attribute_Cell**
Importing Parameter	**Description**
I_X	**X coordinate of the cell in the table**
I_Y	**Y coordinate of the cell in the table**
I_IS_EMPTY	**Cell is empty** 'X' = empty
I_IOBJNM	**Name of characteristic**
I_ATTRINM	**Name of attribute**
I_AXIS	**Axis on which the characteristics are arranged in the drilldown** 'X' = columns, 'Y' = rows
I_CHAVL_EXT	**Attribute value in external display** Key value of the attribute value according to its application in the conversion exit.
I_CHAVL	**Attribute value in internal display** Key value of the attribute value.
I_TEXT	**Text for attribute value**
I_USE_TEXT	**Cell contents** 'X' = text, ' ' = key
I_IS_SUM	**Sum total cell** ‘X’ = sum total cell
I_CELLSPAN	**Number of cells that you want to merge along the drilldown axis**
I_IS_REPETITION	**Repetition** 'X' = cell contents is a repetition

Structural Components

Definition

You use the **Structure_Cell** method to adjust the contents of structural components.

Structure

Method	**Structure_Cell**
Importing Parameter	**Description**
I_X	**X coordinate of the cell in the table**
I_Y	**Y coordinate of the cell in the table**
I_IOBJNM	**Name of the structure**
I_AXIS	**Axis on which the characteristics are arranged in the drilldown** 'X' = columns, 'Y' = rows
I_STRUCTUR_MEMBER	**Name of the structural component** Key value of the structural component.
I_STRUCTUR_MEMBER_2	**Name of the structural component of the other structure** Key value of the structural component of a second structure (if a second structure is available). This is needed, for example, for sort operations.
I_TEXT	**Name of the structural component**
I_IS_SUM	**Sum total cell** ‘X’ = sum total cell
I_IS_REPETITION	**Repetition** 'X' = cell contents is a repetition
I_CELLSPAN	**Number of cells that you want to merge along the drilldown axis**
I_CELLSPAN_ORT	**Number of cells that you want to merge vertically along the drilldown axis**

Data Cells

Definition

You use the **Data_Cell** method to adjust the contents of data cells.

Structure

Method	**Data_Cell**
Importing Parameter	**Description**
I_X	**X coordinate of the cell in the table**
I_Y	**Y coordinate of the cell in the table**
I_VALUE	**Values of the cell without scaling**
I_DISPLAY_VALUE	**Values of the cell after scaling**
I_NUMERICAL_SCALE	**Scaling factors**
I_NUMERICAL_PRECISION	**Number of places after the decimal point**
I_CURRENCY	**Currency** Three-character currency ID, for example, USD, ATS, or DEM.
I_UNIT	**Unit** Unit according to the application of the three-character conversion exit.
I_ ALERTLEVEL	**Alert level** 1, 2, 3 = green; 4, 5, 6 = yellow; 7, 8, 9 = red
I_IS_SUM	**Sum total cell** ‘X’ = sum total cell

You can make many changes, for example, choose to display the alerts as icons, or change the way currencies and units are displayed (units as text, for example).

Error Cells

Definition

You use the **Error_Cell** method to adjust the contents of error cells.

Structure

Method	**Error_Cell**
Importing Parameter	**Description**
I_X	**X coordinate of the cell in the table**
I_Y	**Y coordinate of the cell in the table**
I_TEXT	**Error text**
I_TYPE	**Error type (S, E, A, I, W)**

Labeling Area of the Navigation Block

Definition

You can adjust the contents of the labeling cells of the navigation block with method **NAV_BLOCK_LABEL**.

Structure

The area for labeling can be divided in up to 4 columns.

Method	**NAV_BLOCK_LABEL**
Importing Parameter	**Description**
I_IOBJNM	**Technical name of the characteristic or structure**
I_IS_STRUCTURE	**Object is a structure** ‘X’ = Yes, ‘ ’ = No
I_AXIS	**Axis on which the characteristics / structure are arranged in the drilldown** 'X' = columns, 'Y' = rows
I_CAPTION	**Label text**
I_HRY_ACTIVE	**Status of the display hierarchy** 'X' = Active
Changing Parameter	**Description**
C_CELL1_ID	**ID of cell 1** If you leave this parameter empty, the cell has no ID. The ID can be used to process the cell contents with JavaScript.
C_CELL2_ID	**ID of cell 2**
C_CELL3_ID	**ID of cell 3**
C_CELL4_ID	**ID of cell 4**
C_CELL1_CONTENT	**Cell contents 1** The cell contents themselves can be very simple (for example only a number) or very complex (for example for hierarchy nodes: icons with expanded/collapsed URL and text).
C_CELL2_CONTENT	**Cell contents 2**
C_CELL3_CONTENT	**Cell contents 3**
C_CELL4_CONTENT	**Cell contents 4**

C_CELL1_STYLE	**Style of cell 1** The style defines the color, font, font size, distances, etc. of the cell. The styles are defined in the Cascading Style Sheet. The Cascading Style Sheet is assigned to the template.
C_CELL2_STYLE	**Style of cell 2**
C_CELL3_STYLE	**Style of cell 3**
C_CELL4_STYLE	**Style of cell 4**
C_CELL1_TD_EXTEND	**Extension of TD tag 1** Here you can set the properties such as the width, height, alignment or color of the cell. This parameter is not normally set because many of the properties are already defined when the style is defined.
C_CELL2_TD_EXTEND	**Extension of TD tag 2**
C_CELL3_TD_EXTEND	**Extension of TD tag 3**
C_CELL4_TD_EXTEND	**Extension of TD tag 4**
C_CELL1_WIDTH	**Width of column 1**
C_CELL2_WIDTH	**Width of column 2**
C_CELL3_WIDTH	**Width of column 3**
C_CELL4_WIDTH	**Width of column 4**

Filter Area of the Navigation Block

Definition

You can adjust the contents of the filter cells of the navigation block with method **NAV_BLOCK_VALUE**.

Structure

The area for the filter can be divided in up to 4 columns.

Method	**NAV_BLOCK_VALUE**
Importing Parameter	**Description**
I_IOBJNM	**Technical name of the characteristic or structure**
I_IS_STRUCTURE	**Object is a structure** ‘X’ = Yes, ‘ ’ = No
I_AXIS	**Axis on which the characteristics / structure are arranged in the drilldown** 'X' = columns, 'Y' = rows
I_CAPTION	**Label text**
I_HRY_ACTIVE	**Status of the display hierarchy** 'X' = Active
Changing Parameter	**Description**
C_CELL1_ID	**ID of cell 1** If you leave this parameter empty, the cell has no ID. The ID can be used to process the cell contents with JavaScript.
C_CELL2_ID	**ID of cell 2**
C_CELL3_ID	**ID of cell 3**
C_CELL4_ID	**ID of cell 4**
C_CELL1_CONTENT	**Cell contents 1** The cell contents themselves can be very simple (for example only a number) or very complex (for example for hierarchy nodes: icons with expanded/collapsed URL and text).
C_CELL2_CONTENT	**Cell contents 2**
C_CELL3_CONTENT	**Cell contents 3**
C_CELL4_CONTENT	**Cell contents 4**

C_CELL1_STYLE	**Style of cell 1** The style defines the color, font, font size, distances, etc. of the cell. The styles are defined in the Cascading Style Sheet. The Cascading Style Sheet is assigned to the template.
C_CELL2_STYLE	**Style of cell 2**
C_CELL3_STYLE	**Style of cell 3**
C_CELL4_STYLE	**Style of cell 4**
C_CELL1_TD_EXTEND	**Extension of TD tag 1** Here you can set the properties such as the width, height, alignment or color of the cell. This parameter is not normally set because many of the properties are already defined when the style is defined.
C_CELL2_TD_EXTEND	**Extension of TD tag 2**
C_CELL3_TD_EXTEND	**Extension of TD tag 3**
C_CELL4_TD_EXTEND	**Extension of TD tag 4**
C_CELL1_WIDTH	**Width of column 1**
C_CELL2_WIDTH	**Width of column 2**
C_CELL3_WIDTH	**Width of column 3**
C_CELL4_WIDTH	**Width of column 4**

Service Methods

Definition

Functional components of the table interface.

Use

Service methods are offered along with methods for manipulating cell contents [Seite 351]. You need these when creating new cell contents.

Functions

You can use the following service methods:

Creating Navigation URLs [Seite 366]

Information on the Navigation Status [Seite 367]

Information on a Specific Cell [Seite 368]

Icons [Seite 370]

Sending Messages [Seite 371]

JavaScript Functions [Seite 372]

Creating Navigation URLs

Use

You generate command URLs using the following method. This ensures that the request is sent to the correct page instance of the current session.

Functions

Method	GET_URL
Importing parameter	**Description**
I_R_PARAMETER	**Command parameter** The command parameter is transferred using instances of the class CL_RSR_PARAMETER. Use the methods in this class, for example, ADD, to fill the parameter.
Returning parameter	**Description**
R_URL	**Command URL**

In addition, you can use the following service methods:

Icons [Seite 370]

Information on the Navigation Status [Seite 367]

Information on a Specific Cell [Seite 368]

Sending Messages [Seite 371]

JavaScript Functions [Seite 372]

Information on the Navigation Status

Use

This method returns information on the current navigation status. You can call it up at any time.

Functions

Method	GET_STATE_INFOS
Exporting parameter	**Description**
E_THX_AXIS_INFO	**Distribution of the structures, characteristics and attributes on the axes and their properties** For details about structures, see Data Sets [Seite 342] and AXIS_INFO [Seite 343]
E_T_SLICER	**Dynamic filter** Filter that you can change in navigation and, for example, see in the navigation block. For details about tables, see Data Sets [Seite 342] and AXIS_DATA [Seite 345] Unlike in the set, the ATTRIBUTES component is not offered.
E_T_TXT_SYMBOLS	**Query text element** The text element contains general information (for example, the query key date) about the variable values and information for fixing query filters. For details about tables, see Data Sets [Seite 342] and TXT_SYMBOLS [Seite 349]

In addition, you can use the following service methods:

Creating Navigation URLs [Seite 366]

Information on a Specific Cell [Seite 368]

Icons [Seite 370]

Sending Messages [Seite 371]

JavaScript Functions [Seite 372]

Information on a Specific Cell

Use

This method returns details for cells at a specific cell coordinate.

Prerequisites

You cannot call up this method in the START method.

Functions

Method	GET_CELL_INFO
Importing parameter	**Description**
I_ROW	**Row coordinate of cell in table**
I_COLUMN	**Column coordinate of cell in table**
Exporting parameter	**Description**
E_AXIS	**Axis of the cell** 0 = on the columns, 1 = on the rows, -1 otherwise
E_DATA_ROW	**Data row** Row coordinate in data area This information is important, for example, when jumping from one report to another.
E_DATA_COLUMN	**Data column** Column coordinate in data area This information is important, for example, when jumping from one report to another.
E_CELL_TYPE	**Type of cell** 0 = Empty cell 1 = Data cell 2 = Structure component 3 = Characteristic value 4 = Characteristic header 5 = Display-attribute value 6 = Display-attribute header 7 = Scaling factor
E_IOBJNM	**Characteristic/structure name** This parameter is filled only for cells of type 2, 3, 4, 5 and 6.

E_ATTRINM	**Display-attribute name** This parameter is filled only for cells of type 5 and 6.
E_T_CELL_RESTRICTIONS	**Cell restrictions** Restrictions arising from the position of the cell in the table. For example, there are restrictions on the display of data cells on the axes. For details about tables, see Data Sets [Seite 342] and AXIS_DATA [Seite 345] Unlike in the set, the ATTRIBUTES component is not offered.
E_S_CELL_DATA	**Information about data cells** Information about data cells, for example, the value of the data cell, is available from here. For details about structures, see Data Sets [Seite 342] and CELL_DATA [Seite 347]

In addition, you can use the following service methods:

Creating Navigation URLs [Seite 366]

Information on the Navigation Status [Seite 367]

Icons [Seite 370]

Sending Messages [Seite 371]

JavaScript Functions [Seite 372]

Icons

Use

You use IMG tags in HTML for icons. To fill the IMG tag attribute *SRC*, the path of the icon directory from the MIME Repository or on the ITS is required. The following method returns this path:

Functions

Method	GET_ICON_PATH
Returning parameter	**Description**
R_PATH	**Path for icon directory** You use this path in the HTML IMG tag for SRC. You have to enter only the screen name.

In addition, you can use the following service methods:

Creating Navigation URLs [Seite 366]

Information on the Navigation Status [Seite 367]

Information on a Specific Cell [Seite 368]

Sending Messages [Seite 371]

JavaScript Functions [Seite 372]

Sending Messages

Use

You use the following method to send messages. These appear at the start of the HTML page in a table. You use this function primarily to notify users of errors.

Functions

Method	SEND_MESSAGE
Importing parameter	**Description**
I_CLASS	**Message class**
I_TYPE	**Message type (I, W, E, A, X)**
I_NUMBER	**Message number**
I_MSGV1	**Message variable value 1**
I_MSGV2	**Message variable value 2**
I_MSGV3	**Message variable value 3**
I_MSGV4	**Message variable value 4**

In addition, you can use the following service methods:

Creating Navigation URLs [Seite 366]

Information on the Navigation Status [Seite 367]

Information on a Specific Cell [Seite 368]

Icons [Seite 370]

JavaScript Functions [Seite 372]

JavaScript Functions

Use

The following method enables you to manage JavaScript source code centrally. The source code is set at the start of the HTML page. You can use this function to construct your own JavaScript source code and, for example, call up manipulated cells from there.

Functions

Method	SET_JAVASCRIPT_FUNCTION
Importing parameter	**Description**
I_NAME	**Name of the section of source code** This name is unique. Any source code already stored that has the same name is overwritten.
I_CODING	**JavaScript source code**

In addition, you can use the following service methods:

Creating Navigation URLs [Seite 366]

Information on the Navigation Status [Seite 367]

Information on a Specific Cell [Seite 368]

Icons [Seite 370]

Sending Messages [Seite 371]