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1 About this Document

This guide provides you step-by-step instructions on how to design various SAP BusinessObjects Business Intelligence (BI) documents to effectively view and work with them on an iOS device (iPhone or iPad). Each report that you build demonstrates how to use the powerful reporting features in SAP BusinessObjects Mobile application for iOS.

For information on how to install and configure the SAP BusinessObjects Mobile application for iOS, refer to the Administrator’s Guide published on http://help.sap.com/bomobileios

For information on how to use the SAP BusinessObjects Mobile application on your iOS device, refer to the Mobile Application User Guide published on http://help.sap.com/bomobileios

1.1 Target Readership

This guide aims to assist the Business Intelligence document/report designers who:

- Design BI documents optimized for the mobile device, and enable them for viewing on the mobile devices.
- Manage the layout, accessibility and security of BI documents.
2 Introduction

This section provides how SAP BusinessObjects mobile solution

2.1 Mobile Solution Overview

The SAP BusinessObjects Mobile solution allows mobile users to access the SAP BusinessObjects Business Intelligence (BI) content and data visualizations to make faster and more informed decisions; on the move.

This solution contains three essential components:
- SAP BusinessObjects Mobile client (SAP BI app)
- SAP BusinessObjects Mobile server
- SAP BusinessObjects Business Intelligence (BI) platform server

Besides the above mandatory components, you may have the following optional elements for enhanced security in your landscape:
- A reverse proxy server
- A Sybase Unwired Platform server (along with a relay server)

Below figure depicts the SAP BusinessObjects Mobile architecture:
2.2 Know the SAP BusinessObjects Mobile Application for iOS

The SAP BusinessObjects Mobile application for iOS enables you to access multiple SAP BusinessObjects Business Intelligence (BI) content types using your iOS mobile device. This is a single app supported on both iPhone and iPad, suited to running ad hoc query reporting and analysis.

Using SAP BusinessObjects Mobile for iOS, you can:

- Create connections to the SAP BusinessObjects BI platform server
- Access the various BI documents and analytics content types available on the server.
- Search, view and download documents on your iPhone and iPad devices.
- Obtain notifications, refresh documents, bookmark documents, filter document data, drill on document data, view document information in sections, and effectively collaborate with other business users for informed decision-making.

2.2.1 Supported BI Content Types

The SAP BusinessObjects Mobile for iOS application supports the following SAP BusinessObjects Business Intelligence (BI) content types:

- SAP BusinessObjects Web Intelligence
- SAP Crystal Reports
- Hyperlink objects
- SAP BusinessObjects Dashboards
- SAP BusinessObjects Analysis Applications
- SAP BusinessObjects Explorer information spaces/exploration views
- SAP BusinessObjects Lumira server and cloud content (HANA visualizations)
- SAP Lumira, server for BI Platform
- PDF documents

SAP BusinessObjects Web Intelligence

Listed below are some of the key features of Web Intelligence reports that work on mobile devices:

- Capabilities
The following Web Intelligence report features are supported on mobile devices:
- Filtering of data
- Drilling down to access more details
- Displaying data in charts
- Displaying data based on formulas.

**Data source**
Data of Web Intelligence reports comes from a variety of data sources including:
- Universes (which organize data from relational and OLAP databases into objects)
- Personal data providers (such as CSV and Microsoft Excel files)
- BEx queries (based on SAP Info Cubes)
- Web services
- Advanced analysis workspaces
- SAP HANA

**Designing Web Intelligence reports**
For information on how to create optimized Web Intelligence reports for mobile devices, see the *Designing Web Intelligence Reports for Mobile Devices* section in this document.

**SAP Crystal Reports**

Listed below are some of the key features of Crystal Reports and interactive Crystal Reports that work on mobile devices:

**Capabilities:**
Crystal Report provides support for following features on mobile devices:
- Filters
- Prompts
- Groups
- Displaying data based on formulas
- Conditional formatting
- Graphs in reports to communicate information visually and effectively

**Data source:**
Data for Crystal Reports can be from virtually any data source.

**Designing the Crystal Reports:**
For information on how to create optimized SAP Crystal Reports for mobile devices, see the *Designing Crystal Reports for Mobile Devices* section in this document.

**Hyperlinks objects**

Hyperlink objects can be created in the BI LaunchPad. A hyperlink object has a name and a URL. On tapping a hyperlink document in SAP BusinessObjects Mobile, a Web view opens within the application to render the URL contents (the hyperlink does not open the browser on the mobile device).
SAP BusinessObjects Dashboards

Listed below are some of the key features of Dashboards that work on mobile devices:

- **Capabilities:**
  Dashboard provides support for the following features on a mobile device:
  - Query pane based data connectivity
  - Hierarchies in tables
  - Add-on components
  - Maps, radar, bubble charts, waterfall charts, menus (such as the Picture Menu and Accordion menu), list-builder selectors, and check boxes.
  - The Nova-style theme
- **Data source:**
  Dashboards (created with a Dashboard Builder) are corporate dashboards with analytics based on universe queries.
- **Designing the Dashboards:**
  For information on how to create optimized SAP BusinessObjects Dashboards for mobile devices, see the Designing Dashboards for Mobile Devices section in this document.

SAP BusinessObjects Analysis Applications

Listed below are some of the key features of SAP BusinessObjects Analysis applications that work on mobile devices:

- **Data source:**
  Analysis applications are Web applications that allow you to analyze data from SAP NetWeaver Business Warehouse (BW) and SAP HANA.
- **Designing the Analysis Applications:**
  You can create Analysis Applications using SAP BusinessObjects Design Studio. The design studio uses the latest technologies including HTML 5 rendering and the Eclipse plug-in for designers. For more information on how to create SAP BusinessObjects Analysis applications, see the Designing Analysis application for Mobile Devices section in this document.

SAP BusinessObjects Explorer Information Spaces/Exploration Views

Listed below are some of the key features of SAP BusinessObjects Explorer that work on mobile devices:

- **Capabilities:**
  - Create filters to refine the data
  - Apply measures to analyze data changes
  - View data changes in charts
- **Data source:**
  You can create an information space from any of the following data sources:
  - SAP HANA appliance
Universes created with Universe Designer or with the Information Design Tool
Excel spreadsheets published to BI LaunchPad
Deprecated data sources: Sources no longer used by current information spaces, but still available as data sources

- **Designing the Explorer Information Spaces**
  For information on how to create optimized SAP BusinessObjects Explorer Information Spaces for mobile devices, see the *Designing Explorer Information Spaces for Mobile Devices* section in this document.

### SAP BusinessObjects Lumira server and cloud content (HANA visualizations)

Listed below are some of the key features of Lumira server and cloud content (HANA visualizations) that work on mobile devices:

- **Capabilities:**
  The SAP Lumira Cloud application allows the SAP BusinessObjects Mobile user to explore datasets stored on the cloud and also create visualizations and view stories. SAP Lumira server allows the SAP Mobile user to view Lumira stories.

- **Data Source:**

- **Designing the Lumira server and cloud content (HANA visualizations)**

### SAP Lumira, server for BI Platform

Listed below are some of the key features of SAP BusinessObjects Explorer that work on mobile devices:

- **Capabilities**
  The SAP Lumira, server for BI Platform on Mobile allows the user to view existing Lumira documents on iPad.

- **Data Source**

### Recommendation

The following recommendations are primarily derived from the performance tests on iPad Air devices:

- **Device Recommendation:** Lumira documents are more responsive in devices having quad core processor and with RAM greater than 1 GB (iPad Air, iPad Air 2, iPad 4).
- **Performance Recommendation:** We recommend that you design the document with a maximum of: two data sources, three stories, six parts each, with data volume of 10M cells.
- **Layout Recommendation:** If you do not prefer not to scroll to see visualizations, we recommend you choose wide screen format to design Lumira documents.
• Size Recommendations for Charts: We recommend that chart height be at least 50% of the page, so that the axis labels are clearly visible on the mobile device.
• Font Recommendation for Hyperlink: When you create a hyperlink to another Lumira document or an external URL, we recommend a font size of 13 pts and a minimum of ten characters, which enables you to tap on it easily

PDF Documents

The user can view pdf documents on mobile devices.
3 Configuration Tasks for Mobile Usage of BI Documents

Before users can access BI documents on the mobile app of the SAP BusinessObjects Mobile solution, you need to check whether a mobile category exists on the BI platform. If no mobile category exists, you need to create one. Then you need to assign the BI document to this category.

**Note**

The default name of the mobile category is *Mobile*. Administrators can change the category name in the `mobi.properties` file on the Mobile server under ` [<WebAppServer>_Home]\webapps\MobileBIService\WEB-INF\mobi.properties`. For more information, see “Configuring Categories on the Mobile Server” in the Administrator’s Guide: SAP BusinessObjects Mobile for iOS at [http://help.sap.com/bomobileios](http://help.sap.com/bomobileios).

### 3.1 Creating a Mobile Category on the BI Platform

Check whether a mobile category exists on the BI platform. If this category does not exist, you need to create one.

1. In the Central Management Console under *Categories*, choose **Manage** ➤ **New** ➤ **Category** ➤.
2. When prompted, type *Mobile* as the name for the new category.
3. Click **OK**.


### 3.2 Assigning BI Documents to the Mobile Category

Before users can access BI documents on a mobile device using the SAP BusinessObjects Mobile solution, you need to assign the analysis applications to the mobile category on the BI platform.

1. In the BI launch pad, go to the folder that contains the BI document that you want to assign to the mobile category.
2. Select the document and click **More Actions** ➤ **Categories** ➤.
   
   The *Categories* dialog box appears.
3. Choose the mobile category.
3.3 About Document Categories in SAP BusinessObjects Mobile

In SAP BusinessObjects Mobile, categories help control various aspects of the BI documents accessed through the SAP BI applications on mobile devices.

A category is a logical classification of BI documents. Category names are configured in the `mobi.properties` file on the Mobile server. There are three types of technical categories on the BI platform to which you can assign a BI document:

1. A category that allows the BI document to be displayed and accessed on a mobile device. By default, this category is named "Mobile". All documents that are designed to be accessed on a mobile device should be automatically assigned to the “Mobile” category.
2. A category that ensures that the report layout on the device screen is the same as the Page layout defined on the BI platform. By default, this category is named “MobileDesigned”.
3. A category to secure the document. Documents assigned to this category cannot be downloaded or saved in the device memory. They can only be accessed only by users connected to the server. By default, this category is named “Confidential”.

Note

A BI document can be assigned to more than one category at the same time.

To ensure that your document reports are displayed in a particular layout on the device, you should assign your BI documents to the appropriate category on the BI platform.

Any BI document assigned to the “Mobile” category will be displayed on the device screen based on the Card layout model, which is the default layout for any Web Intelligence report viewed on a mobile device.

To display the BI documents based on the Page layout model on the device screen, assign the document to the “Mobile” and “MobileDesigned” categories. In the Page layout model, all report parts on one page of a report designed in Web Intelligence are displayed on a single device screen. The software scales the size of the report part for an optimal fit on the device screen.
4 Designing Business Intelligence (BI) Reports Optimized for the Mobile for iOS Application

This following section provides step by step information on how to design the various Business Intelligence content for the iOS mobile devices (both iPad and iPhone).

4.1 Designing Web Intelligence Reports for Mobile Devices

You can optimize reports created in SAP BusinessObjects Web Intelligence for use on mobile devices, like smart phones and tablet computers.

The elements, like tables and charts, in the body of a report become elements viewed one at a time on a mobile device screen.

If a report only contains a single report element, it is expanded full screen on the device.

For information on creating a Web Intelligence report, refer to the online help in the Web Intelligence interfaces or one of the following user guides, available on the SAP Help Portal (http://help.sap.com/):

- For SAP BusinessObjects Enterprise XI 3.1, refer to one of the following:
  - Web Intelligence Rich Client User’s Guide
  - Building reports using the Web Intelligence HTML Report Panel
  - Building reports using the Java Report Panel
- For SAP BusinessObjects BI platform 4.0, refer to one of the following:
  - SAP BusinessObjects Web Intelligence User’s Guide
  - SAP BusinessObjects Web Intelligence Rich Client User’s Guide
- For SAP BusinessObjects BI platform 4.1, refer to the Web Intelligence User’s Guide.

Zooming on elements on a mobile device

To zoom, double tap the report part and choose (Zoom).

The zoom option is not provided for free-standing cells because there is no user interaction required for free-standing cells.
4.1.1 Layout Models for Web Intelligence Reports for Mobile Devices

In SAP BusinessObjects Mobile, the layout model you use can ensure that the elements in a report body in an SAP BusinessObjects Web Intelligence report are displayed in an optimized readability on a mobile device screen, whether it is a smartphone or tablet computer.

The layout models for report elements available for a Web Intelligence document are the following:

- **Card layout**
  Assign the document to the `Mobile` technical category in order to display the BI documents based on the "Card layout" model on the device screen.

- **Page layout**
  Assign the documents to the `Mobile` and `MobileDesigned` technical categories in order to display the BI documents based on "Page layout" model on the device screen.

**Technical categories on the Mobile server**

The BI administrator can customize the `Mobile` and `MobileDesigned` category names on the BI platform. However, if you change a category name, you need to update the configuration file (`mobi.properties`) on the Mobile server with the new name. See the topic on customizing category names for more information. If a Web Intelligence document is not assigned to the `MobileDesigned` category and contains one or more report elements with sections, the application displays the report on the device screen according to the Page layout model.

For more information on technical categories, refer to the *Mobile BI Performance and Sizing Guide*.

4.1.1.1 Card Layout Model

In the Card layout model, a single device screen can accommodate a maximum of four report elements.

You can view these screens by sliding your finger across the screen.

If a Web Intelligence report has more than two report elements on a single horizontal line, the report after the first two report elements are moved to the next line on the device screen. If a Web Intelligence report has more than two report elements on a single vertical line, the report elements after the first two report elements are moved to the next screen of the device. The layout of the initial two report elements is maintained on the device screen.

**Note**

- If the Web Intelligence report has only two report elements next to or below each other, their layout is not maintained on the device screen. This is an exceptional case.
- A free-standing cell report element is not displayed separately in the Card layout. For the free-standing cell to appear in a layout, it has to be tied to a report table cell.
The various scenarios for the Card layout are displayed in the following table. The scenarios are for sample portrait and landscape views on a device for a Web Intelligence report with one to four report elements.

The number of layout scenarios increases along with the number of elements in a Web Intelligence report. In the Card layout, it is not possible to accurately predict the appearance of the elements. However, the advantage of the Card layout is that any Web Intelligence document can be viewed on a mobile device without requiring you to redesign the reports.

**Note**

A report element with sections will not appear properly in the Card layout. We recommend you use the Page layout in this situation. If you have designed in Card layout a report with sections in any of its elements, and you later assign the report to the MobileDesigned category in the BI launch pad, you can have layout issues on the mobile device. We recommend that you save the report in the Mobile (default) category.

The first column in the images below displays the layout of Web Intelligence report elements as seen on a personal computer, and the subsequent columns show how the elements appear in the iPad.
<table>
<thead>
<tr>
<th>Personal Computer</th>
<th>iPad - Portrait View</th>
<th>iPad – Landscape View</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram 1" /></td>
<td><img src="image2.png" alt="Diagram 2" /></td>
<td><img src="image3.png" alt="Diagram 3" /></td>
</tr>
<tr>
<td><img src="image4.png" alt="Diagram 4" /></td>
<td><img src="image5.png" alt="Diagram 5" /></td>
<td><img src="image6.png" alt="Diagram 6" /></td>
</tr>
<tr>
<td><img src="image7.png" alt="Diagram 7" /></td>
<td><img src="image8.png" alt="Diagram 8" /></td>
<td><img src="image9.png" alt="Diagram 9" /></td>
</tr>
<tr>
<td><img src="image10.png" alt="Diagram 10" /></td>
<td><img src="image11.png" alt="Diagram 11" /></td>
<td><img src="image12.png" alt="Diagram 12" /></td>
</tr>
<tr>
<td><img src="image13.png" alt="Diagram 13" /></td>
<td><img src="image14.png" alt="Diagram 14" /></td>
<td><img src="image15.png" alt="Diagram 15" /></td>
</tr>
<tr>
<td><img src="image16.png" alt="Diagram 16" /></td>
<td><img src="image17.png" alt="Diagram 17" /></td>
<td><img src="image18.png" alt="Diagram 18" /></td>
</tr>
<tr>
<td>Infoview</td>
<td>iPad – Portrait View</td>
<td>iPad – Landscape View</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td><img src="image1" alt="Infoview Image" /></td>
<td><img src="image2" alt="iPad Portrait View" /></td>
<td><img src="image3" alt="iPad Landscape View" /></td>
</tr>
<tr>
<td><img src="image4" alt="Infoview Image" /></td>
<td><img src="image5" alt="iPad Portrait View" /></td>
<td><img src="image6" alt="iPad Landscape View" /></td>
</tr>
<tr>
<td><img src="image7" alt="Infoview Image" /></td>
<td><img src="image8" alt="iPad Portrait View" /></td>
<td><img src="image9" alt="iPad Landscape View" /></td>
</tr>
</tbody>
</table>

**Related Information**

Page Layout Model [page 18]
Using Sections in Web Intelligence Reports on Mobile Devices [page 51]

### 4.1.1.2 Page Layout Model

If you use the page layout, all report elements (charts, tables, free-standing cells) on one page of a Web Intelligence report are displayed on a single device screen. SAP BusinessObjects Mobile scales the size of the
report element for an optimal fit on the device screen. In some scenarios, there can be disruption to the layout of report elements appearing on device.

⚠️ Restriction

The iPhone does not support documents designed in the Page layout model. If a BI document assigned to the `MobileDesigned` category on the BI platform is viewed on an iPhone, it does not display the report elements based on the page layout designed on the platform. On the iPhone, each application page (single screen) accommodates one report element. If a report contains blank cells, the Card layout model displays the report on the device screen in the same way.

Report elements in subsequent pages of the Web Intelligence report are displayed in further screens, indicated by pagination dots, on the device. If a report element spans multiple pages in the Web Intelligence report, the element belongs to the page where it originates. For example, in the Web Intelligence report, there is a long vertical table in the first page with five pages. On a mobile device, the table can be displayed only on the first page and you scroll vertically to see further data.

If the height or width of a table on a single page of the Web intelligence report does not fit the device screen, you can scroll vertically or horizontally to display the full table. The records of the table are not truncated.

In a Web Intelligence report, objects on a single page in landscape format are shown on a single page on a mobile device.

Below is an example of a report with six report elements. The layout of the report as seen in the Web Intelligence Quick Display view mode is displayed below.

The report layout results in the following layout on the mobile device:
The reports are rendered on the device screen based on the report's page size as received from the Mobile server. SAP BusinessObjects Mobile supports the following page sizes in the portrait and landscape views:

- A4
- A3
- A2
- B4
- Letter
- Legal
4.1.1.3 The "Single Report Element Per Screen" Model

The single report element per screen layout model supports displaying a single report element per page on the Android smart phones and iPhones. The model has following features:

1. A single report element (such as a chart, graph, table or blank cell) of a Web Intelligence report (in portrait mode) is displayed on the screen, without any significant disruption to its layout. The software scales the size of the report element for an optimal fit on the smart phone screen.

2. Report elements in subsequent pages of the Web Intelligence report are displayed in further pages on the smart phone (indicated by page number at the bottom of the screen). If a report element spans multiple pages in the Web Intelligence document, the element belongs to the page that it originates from. As an example let us assume that there is a vertical table in the first report of a document which spans to five pages in Web Intelligence. In the client application, the table is displayed only on the first page and can be scrolled vertically to see further data.

3. In Web Intelligence, report pagination is performed based on a page size of 630 pixels (width) and 860 pixels (height). This is achieved by using the standard margin size of 0.79 inches in the page mode of the Web Intelligence report.

4. If the height or width of a table on a single page of the Web intelligence report does not fit the screen, the table appears on the screen with a vertical or horizontal scroll. The records of the table are not truncated.

4.1.1.4 Creating Effective Web Intelligence Report Layouts for Mobile Devices

You can design Web Intelligence reports that are optimized for mobile devices.

This section provides guidelines, scenarios and tips to achieve the best viewing outcome on the device screen. Normally the size ration and placement of Web Intelligence report elements appears the same in SAP BusinessObjects Mobile. The stretch factor applied on each report element in SAP BusinessObjects Mobile depends on the actual size of the Web Intelligence report element.
Web Intelligence Reports With Elements That Continue Onto Other Pages

SAP BusinessObjects Mobile considers the top left corner (X,Y coordinates) of a report element when deciding where to display a Web Intelligence report element.

In the following example, the report is shown in the Page view mode in Web Intelligence, and the corresponding view in the Page layout model in SAP BusinessObjects Mobile.

The origin (x, y coordinates of the top left corner of the report element) for report elements 2 and 4 lie in the first page. SAP BusinessObjects Mobile does not see the report as split across 3 pages. The report first page and its elements are adjusted to fit on the mobile device screen. However, if the report element 2 or 4 is a table, a scroll bar is enabled on the mobile device screen. If report element 2 or 4 is a chart, the complete chart is displayed on the first page with image shrink.

If a Web Intelligence report element begins on a separate page, then SAP BusinessObjects Mobile places that element on a separate page.

In the following image, Web Intelligence report elements 5, 6, and 7 appear on a separate page in SAP BusinessObjects Mobile because they originate on a separate Web Intelligence report page.
Even though there are 4 pages present in the report when displayed in Web Intelligence, the report has only 2 pages in SAP BusinessObjects Mobile.

Resizing Report Elements in the Web Intelligence Report

When you view a Web Intelligence report element in SAP BusinessObjects Mobile, the proportions are usually the same.

In the following example, observe that the Web Intelligence report element’s size ratio is maintained between Web Intelligence and SAP BusinessObjects Mobile. The stretch factor applied on each Web Intelligence report element on the mobile depends on the actual size of the report element in Web Intelligence.
Spanning Web Intelligence Report Elements

If the right edge of the report element 1 exceeds by more than 5 pixels from the right of element 2, then element 1 is stretched to the edge of the device screen.

Rendering Columns on a Device Screen

Vertical stretching is done only for report elements with charts. Report element with Table and blank cells will not be vertically stretched. In the example below, report elements are stretched vertically on the device screen.
Rendering of Table Columns on the Device Screen

In the report that contains only tables, the preferred height for the tables depends on the number of rows of data in the table. Each row in a table is given 30 pixels.

If there is any white space between the report elements, only horizontal stretching for table report elements is possible. They cannot be stretched vertically. In the following example, report element 1 is stretched horizontally. As report element 2 also contains a table, it cannot be stretched vertically, so it’s shifted upwards.

Rendering of Charts on the Device Screen

If the report contains only charts, then report elements can stretch vertically and horizontally as shown in the following example.
Web Intelligence Documents with Sections

Web Intelligence reports where all report elements are inside the section

In a Web Intelligence document with sections, where there are no report elements outside the sections, the first section will always be shown as in the following example.

Report layout in Web Intelligence

<table>
<thead>
<tr>
<th>Year 2013</th>
<th>Year 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Report viewed on mobile device

User taps the section handle to select other sections
To navigate to other sections, tap or swipe as shown in the above example and select the section that you to be displayed.

**Web Intelligence reports where all report elements are inside sections and sub-sections**

When there are sub-sections present in the report, the report elements of the leaf node section are displayed by default. In the following example, Q1 is the leaf node section and is displayed by default when the report is opened on a mobile device. If there is a mode sub-section named ‘Months’, then the first month of Q1 year 2013 is displayed by default when the report is opened.

**Report layout in Web Intelligence**

```
<table>
<thead>
<tr>
<th>Year 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
</tr>
<tr>
<td>1 2 3</td>
</tr>
<tr>
<td>Year 2014</td>
</tr>
<tr>
<td>Q1</td>
</tr>
<tr>
<td>1 2 3</td>
</tr>
<tr>
<td>Q2</td>
</tr>
<tr>
<td>1 2 3</td>
</tr>
</tbody>
</table>
```

**Report viewed on mobile device**

![User taps the section handle to select other sub-sections of the report]

**Web Intelligence report with sections, sub-sections and non-section report elements**

If a Web Intelligence report has non-section report elements and you open the report on a mobile device, then by default only the non-section report-elements are shown.

To navigate to any of the sections, you swipe as shown in the following example and select the section you want displayed. When the section is displayed, even the non-section report elements are displayed.
If you only want a section report element to be displayed when you navigate through sections, then activate the **Start on a new page** option in the **Table Format** dialog box, in the source Web Intelligence document.

### 4.1.2 Using Free-Standing Cells in Web Intelligence Reports for Mobile Devices

You can use a free-standing cell for text or formulas, or a pre-defined cell to display information.

If the Web Intelligence report is designed using the Page layout, no configuration is required for viewing free-standing cells in the report on a mobile device. However, a free-standing cell in a Web Intelligence report that will be viewed in Card layout needs to be specially formatted so that it can be viewed correctly on the mobile device.
### Note

Empty free-standing cells attached to a table in Web Intelligence tend to overlap the table when the report is viewed on the device. To resolve this issue, adjust the position of the empty free-standing cell in the Web Intelligence report.

For more information on inserting and copying a free-standing cell in a Web Intelligence report, refer to the Displaying data in free-standing cells section in the online help or in the following PDF documentation, available on the SAP Help Portal (http://help.sap.com/):

- For SAP BusinessObjects Enterprise XI 3.1, in the Web Intelligence Rich Client user guide.
- For SAP BusinessObjects BI platform 4.0, refer to one of the following:
  - SAP BusinessObjects Web Intelligence User’s Guide
  - SAP BusinessObjects Web Intelligence Rich Client User’s Guide
- For SAP BusinessObjects BI platform 4.1, refer to the Web Intelligence User’s Guide.

#### 4.1.2.1 To Configure a Free-Standing Cell in a Web Intelligence Report in XI 3.1

For SAP BusinessObjects XI 3.1, you can only create free-standing cells in Web Intelligence Rich Client.

1. Open the Web Intelligence report in Edit mode in Web Intelligence Rich Client.
2. Insert or select a free-standing cell in the report.
3. Right-click the cell and select Edit Format to display the cell format properties dialog box.
4. In the General section, in the Text field, enter the following tag and parameters:

   ```html
   <a href="laction://cell?
   attachdto='[blocknum]'&valign='[alignvar]'&halign='[alignvar1]'"<text></a>
   ```

   Where:

<table>
<thead>
<tr>
<th>Table 1:</th>
<th>Required content</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;attachdto&gt;</code></td>
<td>For this parameter, specify the name of report part to which you want to attach the cell.</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Ampersand (&amp;) and single quote (’) characters are not supported in the value for this parameter.</td>
</tr>
<tr>
<td><code>&lt;valign&gt;</code></td>
<td>Specify a vertical alignment value for the cell, either “top” or “bottom”.</td>
</tr>
<tr>
<td><code>&lt;halign&gt;</code></td>
<td>Specify a horizontal alignment values for the cell: “left”, “center”, “right”. This parameter needs to be specified if more than one free-standing cell is attached to a report part. If a single cell is attached to a report part, it spans the width of the report part by default.</td>
</tr>
</tbody>
</table>
5. In the **Appearance** section, you can set a background image in the cell.

6. In the **Display** section, from the **Read cell content as** dropdown list, select **Hyperlink**.

7. Optionally, in the **Properties** panel for the cell, you can configure the following **Text Format** properties, which are supported for cells on mobile devices:
   - `<Text color>`
   - `<Vertical text alignment>`
   - `<Horizontal text alignment>`
   - `<Background image>`
   - `<Borders>`

**Restriction**

Only the cell properties listed above are supported on mobile devices. Full borders are supported on the device, but border colors are not.

### 4.1.2.2 To Configure a Free-Standing Cell in a Web Intelligence Report in BI 4.X

On the SAP BusinessObjects BI platform 4.X, you can use free-standing cells in a Web Intelligence report for mobile devices.

1. Open a Web Intelligence document in **Design** mode and select the **Report Element** tab.
2. In the **Cell** subtab, click **Blank**, place your mouse over the area of the report where you want to insert the cell, and click the left mouse button.
3. Click the **Formula Bar** icon in the **Analysis** tab to activate the **Formula Bar**.
4. Select the blank cell and in the **Formula Bar**, enter the following hyperlink URL syntax:

   ```html
   <a href="laction://cell?
   attachedto='[blocknum]'&valign='[alignvar]'&halign='[alignvar1]'"<text></a>
   ```
Where:

Table 2:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Required content</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;attachedto&gt;</code></td>
<td>For this parameter, specify the name of report element to which you want to attach the cell.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong></td>
</tr>
<tr>
<td></td>
<td>Ampersand (&amp;) and single quote (') characters are not supported in the value for this parameter.</td>
</tr>
<tr>
<td><code>&lt;valign&gt;</code></td>
<td>Specify a vertical alignment value for the cell, either &quot;top&quot; or &quot;bottom&quot;.</td>
</tr>
<tr>
<td><code>&lt;halign&gt;</code></td>
<td>Specify a horizontal alignment values for the cell: &quot;left&quot;, &quot;center&quot;, &quot;right&quot;. This parameter needs to be specified if more than one free-standing cell is attached to a report element. If a single cell is attached to a report element, it spans the width of the report element by default.</td>
</tr>
<tr>
<td><code>&lt;text&gt;</code></td>
<td>Specify if you want text to appear in the cell. SAP BusinessObjects Mobile does not support currently support URLs for this parameter. The text specified for this parameter is only treated as plain text and is not used as a hyperlink to external URLs.</td>
</tr>
</tbody>
</table>

5. Click the green check mark next to the **Formula Bar** to confirm the formula.

6. Right-click the cell and select the **Format Cell** option.

7. In the **Format Cell** dialog box, customize the following tabs as necessary:

Table 3:

<table>
<thead>
<tr>
<th>Format cell tab</th>
<th>Settings to configure for mobile device-friendly reports</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td>In the <strong>Display</strong> section, from the <code>&lt;Read contents as&gt;</code> dropdown list, select <strong>Hyperlink</strong>.</td>
</tr>
<tr>
<td><strong>Alignment</strong></td>
<td>Set the text alignment in the blank cell using the dropdown lists for <strong>Horizontal</strong> and <strong>Vertical</strong>. You can select or unselect the <strong>Wrap text</strong> option.</td>
</tr>
<tr>
<td><strong>Font</strong></td>
<td>SAP BusinessObjects Mobile only supports the <strong>Font Color</strong> setting.</td>
</tr>
<tr>
<td><strong>Border</strong></td>
<td>Select the symbol for full borders. Border colors and partial borders are not supported by SAP BusinessObjects Mobile.</td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>In the <strong>Image</strong> section, you can upload a background image for the cell.</td>
</tr>
<tr>
<td><strong>Layout</strong></td>
<td>In the <strong>Position</strong> section, you can set the position of the image selected in the <strong>Appearance</strong> tab.</td>
</tr>
</tbody>
</table>

8. Click **OK** to close the **Format Cell** dialog box.

9. Save the report.
4.1.2.3 An Example of a Free-Standing Cell in a Web Intelligence Report Viewed on an iPad

The example shown below is a Web Intelligence report with four report elements (a bar chart, a line graph, a table and a free-standing cell).

The free-standing cell contains the following hyperlink formula bar:

```html
<a href="laction://cell?attachedto='block1'&valign='top'&halign='left'">Data Source GeoHive</a>
```

In this example "block1" is the name of the table in the report.

The cell contents were set as a hyperlink in the Format Cell dialog box, in the Properties tab. In the report, the report elements appear as shown in the following sections.

Report elements as seen in Web Intelligence

- Free-standing cell
- Table (with embedded images)
- Charts

Report elements viewed on a mobile device

The text in the free-standing cell is treated as a hyperlink, so it appears as an active link. The actual (configured) text color will be displayed on the mobile device.
In a Card layout scenario, the above view of the report on the mobile device can also be achieved by setting the horizontal alignment (<halign>) of the free-standing cell (with the hyperlink URL) to "center" or "right". All the values ("left", "center", "right") work for the cell in this case, because only one free-standing cell is attached to the table report element. In this case, irrespective of the specified alignment, the cell always spans the width of the report element to which it is attached (top or bottom), based on the value of <valign>.

If there are two or three free-standing cells, the alignment of each cell is selected based on the value of <halign> specified in the URL.

### 4.1.3 Embedded Image Support for Mobile Devices

SAP BusinessObjects Mobile supports embedded images in Web Intelligence reports.

**Note**

The mobile app supports only normal and stretch display modes for embedded images. If the Web Intelligence document contains an embedded image with either tile, vertical tile, or horizontal tile display mode, and when you view this document on the mobile device, the embedded image is displayed in the normal mode.

You must use embedded images for cells from the BI server or a local directory. The valid formats for specifying an embedded image are listed in the table below.

<table>
<thead>
<tr>
<th>Image Specification in Cell Appearance</th>
<th>Example of Value</th>
<th>Valid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image from a web URL</td>
<td><a href="https://www.xyz.com/Logo.jpg">https://www.xyz.com/Logo.jpg</a></td>
<td>![X]</td>
</tr>
<tr>
<td>Web URL</td>
<td>Web URL</td>
<td></td>
</tr>
<tr>
<td>Images at web URLs are not supported.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Image Specification in Cell Appearance</td>
<td>Example of Value</td>
<td>Valid</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
</tbody>
</table>
| URL of an image stored on the BI platform server | `<boimg>://MyCorpImage.png`  
`<boimg>` maps to the following folder location on the server:  
C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\images  
If your image file is stored on the server mentioned above, Web Intelligence retrieves the image from that server location. We recommend this method for embedding images, because you can use the same image in multiple reports and various documents without producing copies of the image.  
⚠️ Restriction  
Do not specify the name of your image as  
TopHeaderBlue.png or LeftHeaderBlue.png, as the application ignores these image names. | (recommended) |
| Image from file                         | C:\Pictures\Logos\Corporate\S&M.png  
Image located in a local directory of the report designer’s system. | ✓                      |

**Note**

- All image file formats (such as .jpeg, .png) supported in Web Intelligence are supported by SAP BusinessObjects Mobile on devices.
- The maximum height of a table row on the device screen is 28 pixels. If the specified height of the image embedded in a table cell is more than 28 pixels, then the image is truncated when the report is displayed on a mobile device.

For more information on formatting the appearance of table cells, refer to the *To format the appearance of reports and their headers, footers, sections, tables, and table cells* topic in the *Web Intelligence User’s Guide* or in the Web Intelligence online help.

**Related Information**

To Configure a Free-Standing Cell in a Web Intelligence Report in XI 3.1 [page 29]  
To Configure a Free-Standing Cell in a Web Intelligence Report in BI 4.X [page 30]
4.1.4 Constraints of Web Intelligence Report Parts on Mobile Devices

Some values may not work on an iPhone because of screen area and memory constraints. The values provided are primarily derived from the performance tests on iPad devices.

**Tables**

<table>
<thead>
<tr>
<th>Table Type</th>
<th>Maximum size supported on device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical table</td>
<td>10,000 rows and 20 columns (10,000*20)</td>
</tr>
<tr>
<td>Horizontal table</td>
<td>20 rows and 10,000 columns (20*10,000)</td>
</tr>
<tr>
<td>Cross table</td>
<td>10,000 rows and 330 columns (10,000*330)</td>
</tr>
</tbody>
</table>

Tables with more rows and columns than those recommended above are also supported on the iPad device; however, users can encounter issues with interaction speed and response time.

**Line Charts**

<table>
<thead>
<tr>
<th>Display Parameter</th>
<th>Boundary Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-axis value points</td>
<td>300</td>
</tr>
<tr>
<td>X-axis value points with chart slider</td>
<td>54</td>
</tr>
<tr>
<td>Series</td>
<td>12</td>
</tr>
<tr>
<td>Legends</td>
<td>Portrait: 7; Landscape: 12</td>
</tr>
</tbody>
</table>

**Pie Charts**

<table>
<thead>
<tr>
<th>Display Parameter</th>
<th>Boundary Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-axis value points (sectors)</td>
<td>More than 1600</td>
</tr>
<tr>
<td></td>
<td><em>Note</em> When the number of sectors is more than eleven, all sectors higher than the 11th sector are grouped into a single sector named “Other”. The sectors in the pie chart are displayed in descending order of measure value.</td>
</tr>
<tr>
<td>X-axis value points (sectors) with chart slider</td>
<td>11</td>
</tr>
<tr>
<td>Legends</td>
<td>12</td>
</tr>
</tbody>
</table>

**Vertical Bar (Column) Charts**

<table>
<thead>
<tr>
<th>Display Parameter</th>
<th>Boundary Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-axis value points</td>
<td>300</td>
</tr>
<tr>
<td>X-axis value points with chart slider</td>
<td>54</td>
</tr>
<tr>
<td>Series</td>
<td>12</td>
</tr>
<tr>
<td>Legends</td>
<td>Portrait: 7; Landscape: 12</td>
</tr>
</tbody>
</table>
Stacked Bar Charts

<table>
<thead>
<tr>
<th>Display Parameter</th>
<th>Boundary Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-axis value points</td>
<td>300</td>
</tr>
<tr>
<td>X-axis value points with chart slider</td>
<td>54</td>
</tr>
<tr>
<td>Series</td>
<td>12</td>
</tr>
<tr>
<td>Legends</td>
<td>Portrait: 7; Landscape: 9</td>
</tr>
</tbody>
</table>

Grouped Bar Charts

<table>
<thead>
<tr>
<th>Display Parameter</th>
<th>Boundary Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-axis value points</td>
<td>300</td>
</tr>
<tr>
<td>X-axis value points with chart slider</td>
<td>54</td>
</tr>
<tr>
<td>Series</td>
<td>12</td>
</tr>
<tr>
<td>Legends</td>
<td>Portrait: 7; Landscape: 12</td>
</tr>
</tbody>
</table>

Note

The recommended minimum bar width is 40 pixels for bar charts.

4.1.5 Using a Web Intelligence Report as a Scorecard on a Mobile Device

You can configure a table in a Web intelligence report to display as a scorecard on a mobile device, where the table contains an additional column with a feature like a micro chart, trend lines or status icons.

You can use the features below in vertical and cross tables. You can also define a combination of these features in a vertical or cross table.

Note

- Every scorecard feature in the name of a report block (table) should begin with a semi-colon.
- Several scorecard features can be used on a single table by specifying them in a sequence in the table block name. Separate the features using semicolons.
- Embedded images are not supported for scorecard columns and column cells.

To configure a Web intelligence report to appear as a scorecard on a mobile device:

1. Open a Web Intelligence document in Design mode.
2. Create a table with the data you want in the scorecard.
3. Right-click the table and select Format Table from the contextual menu.
4. In the Format Table dialog box, in the General tab, enter the applicable syntax in the Name text box using the syntax described in the table below.

Acronyms used in the table below:
- SL: Spark line
- L: Line chart
- C: Column
- GF: Gradient fill
- MBC: Micro bar chart
- SC: Scorecard
- TT: Trend traffic
- TA: Trend arrow

Table 5: Micro chart features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Syntax</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line</td>
<td>;SL_L_«column name for micro chart&gt;<em>C</em>&lt;starting number of column&gt;_«ending number of column&gt;</td>
<td>Specify the columns to be converted as Line micro chart.</td>
<td>;SL_L_Revenues_C_5_16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>On the device, the report table displays the column Revenues with a spark line of the data values contained in columns 5 to 16 of the table. The spark line appears as a linear curve because 'L' is used in the formula.</td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td>;SL_GF_«column name for micro chart&gt;<em>C</em>&lt;starting number of column&gt;_«ending number of column&gt;</td>
<td>Specify the columns to be converted as Area micro chart.</td>
<td>;SL_GF_QSales_C_7_10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>On the device, the report table displays the column QSales with a spark line of the data values contained in columns 7 to 10 of the table. The area of the micro chart enclosed within the spark line and the axis is filled or shaded because gradient fill ('GF') is applied.</td>
<td></td>
</tr>
<tr>
<td>Bar</td>
<td>;MBC_BAR_«column name for bar micro chart&gt;<em>C</em>&lt;starting column_number&gt;_«ending_column_number&gt;</td>
<td>Specify the columns to be converted to a Bar micro chart.</td>
<td>;mbc_BAR_Trend_C_5_17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>On the device, the report table displays the column Trends with data from columns 5-17 of the table as a bar microchart:</td>
<td><img src="image1" alt="Trend" /></td>
</tr>
</tbody>
</table>
Table 6: Trend icon feature

<table>
<thead>
<tr>
<th>Feature</th>
<th>Syntax</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circular glossy icon</td>
<td>;SC_TT_C_[column number from left]_[position of the arrow to be displayed]</td>
<td>Use a circular icon to depict the trend of a scorecard parameter. To define the icon position (with respect to values in the column), specify 'R' for right and 'L' for left.</td>
<td>;SC_TT_C_4_R</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i Note</td>
<td>On the device, the fourth column of the table (scorecard) displays a trend icon to the right of the data values in the column.</td>
</tr>
<tr>
<td>Arrow</td>
<td>;SC_TA_C_[column number from left]_[position of the arrow to be displayed]</td>
<td>Use an arrow to depict the trend of a table parameter. To define the arrow position (with respect to values in the column), specify 'R' for right and 'L' for left.</td>
<td>;SC_TA_C_5_L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i Note</td>
<td>On the device, the fifth column of the scorecard displays a trend arrow to the left of the parameter (column) values.</td>
</tr>
</tbody>
</table>

Table 7: Status icon feature

<table>
<thead>
<tr>
<th>Feature</th>
<th>Syntax</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Button</td>
<td>;SC_GF_C_[column number from left]</td>
<td>Define the value to be displayed on the button based on the Web Intelligence alert color.</td>
<td>;SC_GF_C_6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i Note</td>
<td>On the device, the sixth column of the scorecard displays the values of column data (formatted as a percentage). This is indicated by a button that is partially filled to indicate the percentage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The color of the gradient fill in the button is based on the alerter applied to the column data values in the table. If no alerter is applied to the data column, then the gradient fill will have a default color.</td>
</tr>
</tbody>
</table>
4.1.5.1 Examples of a Web Intelligence Report Used as a Scorecard on an iPad

Example

Micro charts in a crosstable

You have designed a report with the title "Performance dashboard change for landscape". The report has a crosstable containing sales overview data. An example of the structure of this crosstable is depicted in the figure below.

To display the crosstable as a scorecard on the iPad, in the Web intelligence report you define in the Format Table dialog box, General tab, the Name of the crosstable as follows:

;SC_GF_C_4;SL_GF_Sales_C_5_16

After you save the report, it appears as a scorecard on the iPad as shown in the figure below:

In the name shown for the crosstable in the report, you can see that on the iPad:

- The crosstable displays data of the fourth column as a button icon with a gradient filling to indicate percentage values. The color of the gradient depends on the applied alert.
- The data from columns five to sixteen of the table is displayed in micro charts in a single column, "Sales". The micro chart in each row of the table consists of a spark line with gradient filling and depicts the revenue trend across twelve months of the year.

Example

Trend traffic icon in a vertical table

You design a Web Intelligence report with the name "Yearly Business Performance" that contains a vertical table with zonal business performance data as shown in the figure below.
To display the vertical table as a scorecard in which a traffic icon indicates the trend of sales revenue, you define in the Format Table dialog box, General tab, the Name of the vertical table in your Web intelligence report as:

;SC_TT_C_3_R

After you save the report, it appears as follows when you view the report on the iPad:

### 4.1.6 Displaying Micro Charts in Web Intelligence Tables as Bullet Graphs on Mobile Devices

SAP BusinessObjects Mobile can display the micro charts in Web Intelligence tables as bullet graphs.

Bullet graphs (or Bullet charts) do not exist in Web Intelligence; SAP BusinessObjects Mobile auto-creates them on a mobile device from a specially configured Web Intelligence table.

#### Configuring a Web Intelligence table to be a bullet graph in a micro chart

1. You create a vertical table in a Web Intelligence report that contains the following columns:
Table 8:

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fields</td>
<td>The column that contains the measures.</td>
</tr>
<tr>
<td>Actual</td>
<td>The column with the actual (current) value of the measures.</td>
</tr>
<tr>
<td>Comparative</td>
<td>The column with the target value of each measure against which the actual value is compared.</td>
</tr>
<tr>
<td>Min</td>
<td>Qualitative range of measure indicating poor performance.</td>
</tr>
<tr>
<td>Mid</td>
<td>Qualitative range of measure indicating satisfactory performance.</td>
</tr>
<tr>
<td>Max</td>
<td>Qualitative range of measure indicating excellent performance.</td>
</tr>
</tbody>
</table>

The following table shows an example of a vertical table:

<table>
<thead>
<tr>
<th>Fields</th>
<th>Actual</th>
<th>Comparative</th>
<th>Min</th>
<th>Mid</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Order Size</td>
<td>$330.00</td>
<td>$540.00</td>
<td>$350.00</td>
<td>$500.00</td>
<td>$500.00</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>$4.40</td>
<td>$4.20</td>
<td>$3.50</td>
<td>$4.50</td>
<td>$5.00</td>
</tr>
<tr>
<td>New Customers Count</td>
<td>$1,750.00</td>
<td>$2,100.00</td>
<td>$1,400.00</td>
<td>$2,000.00</td>
<td>$2,500.00</td>
</tr>
<tr>
<td>% Profit</td>
<td>$23.00</td>
<td>$26.00</td>
<td>$20.00</td>
<td>$25.00</td>
<td>$30.00</td>
</tr>
<tr>
<td>Revenue (in 1000s USD)</td>
<td>$280.00</td>
<td>$250.00</td>
<td>$150.00</td>
<td>$225.00</td>
<td>$300.00</td>
</tr>
</tbody>
</table>

2. In the Format Table dialog box for the vertical table, in the General tab, enter in the Name field the following syntax: ;BC_[column alias]_[column range]_tl_[measure column number]
   For example: ;BC_Actual vs Target_C_2_6_tl_1
   Where:
   - BC is the keyword for Bullet Chart.
   - [column alias] is the label you want displayed in the bullet charts on the mobile device. You can specify any string, example ‘Actual vs Target’.
   - The range of columns are the parameters (Actual, Comparative, Min, Mid and Max) required for bullet charts. The format of this BC_<starting column number>_ending column number >.
   - tl is a keyword, and the <measure column number> indicates the column (‘1’). Fields in the above example that precedes the bullet chart column on the mobile device.

   **Note**
   If no value is specified for tl, SAP BusinessObjects Mobile uses the first column of the vertical table as the default value.

   **Tip**
   SAP BusinessObjects Mobile also supports variants of bullet charts, including reverse bullet charts and bullet charts with negative values. To configure a reverse bullet chart, follow the same instructions as provided above, but replace the BC part of syntax with RBC. For example, the table name, using the vertical table above, would be ;RBC_Actual vs Target_C_2_6_tl_1.
After you have assigned the table the BC syntax name and the report is saved in Web Intelligence, then when you view the report on a mobile device, the table contains a bullet chart, as in the figure below.

Each measure listed in Fields column has a corresponding bullet chart in the "Actual vs Target" column on the mobile device.

For each field (measure), users can double-tap the micro chart to see the bullet chart in a zoomed view as shown in the figure below.

i Note

The vertical table in Web Intelligence can have other columns besides the mandatory columns. These additional columns are retained in their original format when the vertical table is displayed on the mobile device.

4.1.7 Linking Web Intelligence Reports to Other Documents on the BI Platform Server

In a report for a mobile device, you can use hyperlinks between a table cell in a report and other documents in the CMS on the BI platform server.

Tip

If you want users to navigate between BI documents, use an OpenDocument URL instead of SAP BI URLs. You can use SAP BI URLs to launch the SAP BI application from outside SAP BusinessObjects Mobile (from a third party iOS application) and to open a specific BI document or report.

For example, the user might be viewing a document called "Resort_Revenues" that displays a table similar to the table below.
The values of the Country {‘US’, ‘France’} appear as hyperlinks on the mobile device. When a user clicks or taps either of these values, a document with useful information corresponding to these countries opens on the mobile device. For instance, when the user clicks ‘France’, a document appears displaying the aggregate revenue of all resorts across all services in France.

To have a hyperlink between a table cell and another document, in the cell you add to the `<OpenDocument>` URL element certain parameter values. The basic OpenDocument URL syntax is:


SAP BusinessObjects Mobile supports only the following query string parameters as element of the OpenDocument URL syntax.

### Table 9: Document Identifier parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;iDocID&gt;</code></td>
<td>This is the unique identifier of the document in the CMS. It is used in conjunction with <code>&lt;sIDType&gt;</code>.</td>
</tr>
<tr>
<td><code>&lt;sIDType&gt;</code></td>
<td>Specifies the type of object identifier used to specify the document.</td>
</tr>
<tr>
<td><code>&lt;sDocName&gt;</code></td>
<td>Specifies the name of the document in the CMS.</td>
</tr>
<tr>
<td><code>&lt;sInstance&gt;</code></td>
<td>Specifies the scheduled instance of the target document to open. Used in conjunction with <code>&lt;sDocName&gt;</code> or <code>&lt;iDocID&gt;</code>.</td>
</tr>
</tbody>
</table>

**Note**

SAP BusinessObjects Mobile supports two valid values for `<sInstance>`: **User** and **Param**.

### Table 10: Input parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;sReportName&gt;</code></td>
<td>Specifies that the report opens if the target document contains multiple reports.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>&lt;sRefresh&gt;</code></td>
<td>A flag parameter with two valid values: 'Y', 'N'. The value of this flag determines whether a database refresh should be forced when the target document is opened.</td>
</tr>
<tr>
<td><code>&lt;lsM[NAME]&gt;</code></td>
<td>Specifies multiple values for a prompt. [NAME] is the text of the prompt.</td>
</tr>
<tr>
<td><code>&lt;lsS[NAME]&gt;</code></td>
<td>Specifies a value for a single prompt. [NAME] is the text of the prompt.</td>
</tr>
</tbody>
</table>
| `<sReportPart>`    | Use this parameter to view the part of a report in a Web Intelligence document. Report part can be a section, table, image, div, and so on. You also need to specify the mode in which you want to view the report part. The values for mode are:  
  - full: Renders the full report. However, you land on the specified report part.  
  - part: Renders only the report part that you have specified. You cannot view the other report parts of the target report.  
For example, to view the part of a report of a Web Intelligence document, use the following URL:  

**i Note**

For information on the syntax and various parameters of an OpenDocument URL, refer to the parameter reference information in the Viewing Documents Using OpenDocument guide:

- For XI 3.x:  

- For BI 4.x:  

**Example: An OpenDocument URL configured for a report cell in a BI document**


iDocID=AWimiw9StnhGm993evk.Amc&sIDType=CUID&sReportName=Report2&sRefresh=Y&lsMProdu
tName=Cycle;Car

Where:

- An OpenDocument URL should have either the `<iDocID>` or `<sDocName>` parameter with valid values.
- Spaces are allowed in the name of the target document (`<sDocName>`).
If an OpenDocument URL configured for a report cell contains parameters other than those mentioned in the above table, the application ignores them.

If an OpenDocument URL has been configured within a hyperlink object, the current session is passed to the OpenDocument URL so that the user is not asked to authenticate twice.

**Restriction**

In Web Intelligence and Crystal Reports documents, if the server value specified in an OpenDocument URL is different from the server on which the source document resides, SAP BusinessObjects Mobile displays the following error message when you click or tap the URL: *An error has occurred: could not find the document.* This is a known limitation in SAP BusinessObjects Mobile.

### 4.1.8 Drilling on Web Intelligence Report Data on Mobile Devices

Drilling on reports lets you look deeper into your data to discover the details behind a good or bad summary result displayed in tables, charts, or sections.

You allow drilling on report data by setting a scope of analysis in the Web Intelligence report.

The scope of analysis for a query is extra data that you can retrieve from the database that is available to offer more details on the results returned. This extra data does not appear in the initial result report, but it remains available in the data cube, and you can pull this data into the report to allow you to access more details at any time. This process of refining the data to lower levels of detail is called drilling down on an object.

In the universe, the scope of analysis corresponds to the hierarchical levels below the object selected for a query. For example, a scope of analysis of one level down for the object “Year”, would include the object “Quarter”, which appears immediately under “Year”. The Universe Designer defines hierarchies for the dimensions of the report dataset.

You can find more information about drilling and a scope of analysis in the Web Intelligence online help or user guides, which are available in the “Analytics” section on the SAP Help Portal (http://help.sap.com/analytics).

### 4.1.9 Filters and Input Controls in Web Intelligence Reports on Mobile Devices

You can filter reports to limit the displayed results.

The data you filter out remains in the document; it is simply not displayed in the report tables or charts. This means you can change or remove report filters in order to view the hidden values, without modifying the query behind the document.

You can apply different filters to different parts of a report. For example, you can limit the query results to a specific product line and then in the report, allow filtering of the results for a table or chart to a specific region or customer profile.

You can find more information about filtering report data in the Web Intelligence online help or user guides, which are available in the “Analytics” section on the SAP Help Portal (http://help.sap.com/analytics).
4.1.10 Linking Report Elements

Using tables and charts as input controls

You can define tables and charts as input controls. Table-based and chart-based input controls appear in the Input Controls panel (in Web Intelligence on BI platform) in the same way as regular input controls, but you select values in the table or chart itself to filter the dependent report elements. When you select cells, columns or rows in tables, or clickable data areas in charts, Interactive Analysis (Web Intelligence) filters the values in the associated report elements according to the values you selected.

When a report is in drill mode, table-based and chart-based input controls are disabled. They are re-enabled when drill mode is deactivated.

In the context of the Mobile application, this concept is known as "Report element linking". For information on how to define a table or chart as an input control, see to page 181 of the Building Reports with Interactive Analysis guide available at: http://help.sap.com/businessobject/product_guides/IA10/en/ia_user_guide_en.pdf

Report element linking on the device

Consider the report displayed in the figure below:
In Web Intelligence, you have linked the table to the bar-chart so that the table acts as the input control. Let us suppose that, you select a record with the value of <Year> = '2004' in the table. The report is refreshed to display the chart having data filtered according to your selection, as shown below:
4.1.11 Prompts in Web Intelligence Reports on Mobile Devices

A prompt is a dynamic filter that displays a question every time you refresh the data in a document.

**Note**

If there are prompts, the following refresh icon appears in the toolbar on the mobile device screen.

You can find more information about prompts, and how to configure them, in the Web Intelligence online help or user guides, which are available in the “Analytics” section on the SAP Help Portal (http://help.sap.com/analytics).

You can use prompt variants to simplify the selection of values each time you open a report. All the parameters that you had chosen previously are saved as variant. Thus, every time you refresh the report you can select the variant directly instead of selecting every parameter that you want to view.

**Note**

You can find more information about prompt variants, and how to create them, in the Web Intelligence online help or user guides, which are available in the “Analytics” section on the SAP Help Portal (http://help.sap.com/analytics).
4.1.12 Configuring a Combined Column and Line Chart in Web Intelligence Reports for use on the Mobile Device

A combined column and line chart is a combination of the bar and line elements and found in the Column charts in Web Intelligence. It can display multiple measures.

The figure below displays an example:

For a combined column and line chart to appear on the mobile device as expected, you need to explicitly specify the Region Type for all chart measures in the Web Intelligence report. In Web Intelligence 4.1, the Region Type can be found in the Global Measure Properties section of the Format Chart dialog box.

Note

- Region types other than 'Bars' and 'Lines' are not supported in the application.
- The application does not support combined column and line charts with dual axes.

You can find more information about charts, and how to configure them, in the Web Intelligence online help or user guides, which are available in the “Analytics” section on the SAP Help Portal (http://help.sap.com/analytics).
4.1.13 Application Support for Dual Axis Charts

Dual axis charts have two Y-axes (primary and secondary) against a single X-axis. This means, that they display two Y-axis variables simultaneously in the same chart. The figure below displays a dual axis chart:

SAP BusinessObjects Mobile supports the following types of Web Intelligence dual axis charts:
- Dual Axis Column
- Line with 2 Y-axes

The following properties of dual axis charts are supported in SAP BusinessObjects Mobile:
- Chart name
- Axis labels
- Color palettes
- Formulas in the dimensions and measures
- Formulas in the chart name and custom axis

Note
The following are limitations for Web Intelligence dual axis charts in SAP BusinessObjects Mobile:
- The line graph in the dual axis chart should always be on the secondary axis.
- Report Element Linking (REL) is not supported in dual axis charts.

You can find more information about charts, and how to configure them, in the Web Intelligence online help or user guides, which are available in the “Analytics” section on the SAP Help Portal (http://help.sap.com/analytics).

Related Information

Linking Report Elements [page 46]

4.1.14 Using Sections in Web Intelligence Reports on Mobile Devices

Sections allow you to split report information into smaller, more comprehensible parts.

You can create a section on a hierarchy in a table, so that each member of the hierarchy becomes a section header. You can then expand sections in the same way as you expand members in a column in a table.

You can find more information about sections, and how to configure them, in the Web Intelligence online help or user guides, which are available in the “Analytics” section on the SAP Help Portal (http://help.sap.com/analytics).

Note

For details on retaining sections across reports, refer Administrator’s Guide.

4.1.15 Using Hierarchies in Web Intelligence Reports on Mobile Devices

SAP BusinessObjects Mobile supports hierarchical data in Web Intelligence reports.

Example

A report displaying hierarchical data on an iPad or iPhone

The following image shows an example of a report displaying hierarchical data in a table.
4.15.1 How SAP BusinessObjects Mobile interprets hierarchies in Web Intelligence reports

SAP BusinessObjects Mobile supports prompts and hierarchical lists of values defined in Web Intelligence reports and the universe on which the report query is based.

**Dependent (nested) prompts**

Some objects can cause Web Intelligence to display a dependent prompt when they are included in a prompt definition. The universe designer defines the lists of values of these objects hierarchically in relation to the lists of values of other objects in the universe.

**Example: Choosing a reservation date**
In this example, the universe designer has defined the [Reservation Year], [Reservation Quarter], [Reservation Month], [Reservation Week] and [Reservation Date] objects in the hierarchy. If you include a prompt: [Reservation Date] In List <values>, Web Intelligence displays these objects in a hierarchy in the prompt dialog box.

In SAP BusinessObjects Mobile, the dependent prompt for this example appears on the iPad screen as shown in the below figure:

Dependent prompt dimensions (Year, Quarter, Month, Week and Date) appear in a cascading manner and are enabled successively (as user makes selections) on device

In order to select a reservation date, the user must select in the following order:

1. The Reservation Year to which the date belongs.
2. The Reservation Quarter of the year.
3. The Reservation Month of the quarter.
4. The Reservation Week of the month.
5. The specific reservation date.

When the user selects the Reservation Year, the values for Reservation Date are restricted based on the selected year values, and so on.
The values of each hierarchy object in the prompt screen of SAP BusinessObjects Mobile are enabled successively as the user makes selections.

For example, the values for Reservation Quarter are enabled only after values for Reservation Year are selected; values of Reservation Month are enabled only after values for Reservation Quarter are selected, and so on.

Hierarchical lists of values

If your universe contains hierarchical lists of values, these lists appear in tree form. You navigate down through the tree to the items you want.

Whether a list of values (LOV) appears as a dependent prompt or hierarchically depends on how the list is configured in the universe.

Below is an example of a hierarchical LOV defined in the universe:
In the above example, there are 3 levels in the hierarchy. For a prompt-enabled report with the hierarchical LOV defined as above on the BI platform, when the user refreshes the report on the mobile device, the following panel appears in SAP BusinessObjects Mobile:

![Hierarchical list of values (Choosing a value takes you to the values of next level in the hierarchy)](image)

On selecting an object (such as Accessories), users can proceed to successive levels of values in the hierarchy and make selections.

Based on the type, a hierarchical prompt may:

- Allow selection of only a single value in hierarchy.
- Allow selection of multiple values in hierarchy.

**Note**

In a multiple value prompt, the number next to the arrow (the 'Disclosure' symbol) at each level indicates the total number of selections made for that object.

After making selections, users tap **Done** on the prompt screen, and the report displays data filtered based on their selections in the hierarchical prompt.

Users can also refresh the LOV in prompt by tapping the Refresh symbol that appears at the bottom right of the screen.

**Related Information**

Prompts in Web Intelligence Reports on Mobile Devices [page 48]
4.1.16 Geo Analysis Charts for Mobile Devices

In Geo analysis, report data is rendered in a Geo-localized format.

Geo analysis displays BI data for different geographic locations on the world map. These locations are known as points of interest (POIs). Each POI has a unique value for location (latitude, longitude) and name (such as city, state, company or store name).

When the user taps a POI, a pop-up window appears, displaying the measure value for the location, as in the following figure.

![Tapping a POI displays a pop-over indicating the measure value for the POI](image)

When the user taps the arrow symbol in the pop-up window, a Web Intelligence report element appears, displaying data specific to the POI.

![A report element appears over the POI](image)

By sliding a finger towards the right on the report element, the user can view other report elements (such as a chart or graph). The user can select the zoom view of a popup window by double tapping it. To return to the map view, the user chooses Back.

**Note**

To access a Geo analysis, you have to be connected to the Internet. SAP BusinessObjects Mobile retrieves the globe map from Google maps via the internet. If you have downloaded a BI document with Geo analysis reports, and you view these reports offline, only the points of interest (POIs) appear on the device screen and the map is unavailable in the background.

You can filter the information in a Geo analysis based on a selected area (radius) of interest around your current geographic location, as in the figure below.
Points of interest

To configure a Web Intelligence report block to display data for a Geo analysis, one of the dimensions in the data source must be in the point of interest (POI) format. A POI is a structure containing the following information fields:

- POI name (mandatory)
- POI location {latitude;longitude} (mandatory)
- POI image
- POI associated link

The POI image is an icon (usually provided as an image URL) that represents the point of interest in the Geo analysis. The POI associated link is a URL containing meta-information about the point of interest. These fields are optional and are not necessarily required to design the report as a Geo analysis.

Note

Ensure that you have enabled the Show current location setting for Web Intelligence in Device Settings SAP BI.
# 4.1.16.1 To Configure a Vertical Table in a Web Intelligence Report for use in Geo Analysis

You can configure a vertical table to appear as a Geo map on a mobile device.

1. In a Web Intelligence document, from the **Design** mode dropdown list in the top corner of the toolbar, click **Structure only** to switch to **Structure** mode.

2. Insert a vertical table and assign it the following data:

   ```
   {<POI name>, <Latitude>, <Longitude>, <Image URL>, <Dimension 1>, <Dimension 2>, <Dimension 3>, <Measure>}
   ```

   Below is an example of a vertical table configured for Geo analysis viewed in Web Intelligence **Document Structure and Filters** tab.

   ![Example of a vertical table configured for Geo analysis](image)

   Where:
   - `<Latitude>`, `<Longitude>`, `<Image Url>` and `<Link Url>` are the fields defining a POI.
   - `Id`, `Name`, `City`, `Quarter` are the dimensions.
   - `Carbon Footprint` is the measure.

3. Right-click the vertical table and select **Format Chart**.

4. In the **General** section, enter in the **Name** text box the syntax:

   ```
   mapLt(n)_lo(n)_poi(n)_od(n)_imu(n)
   ```

   Where:
   - `map` is the keyword.
   - `lt(n)` depicts the table column for latitude values for POIs (`n` represents the column number starting from 1).
   - `lo(n)`: depicts the table column for longitude values for POIs (`n` represents the column number starting from 1).

   **Note**

   Geo analysis recognizes only the latitude and longitude values of the type "Number".
   - `poi(n)`: depicts the table column for POI name (`n` represents the column number starting from 1).
   - `od(n)`: is the table column for OpenDocument URLs for each POI (`n` represents the column number starting from 1). This item is an optional, but recommended, part of the syntax.
   - `imu(n)`: depicts the column with an image URL for the POI icon (`n` represents the column number starting from 1). This item is an optional, but recommended, part of the syntax.
5. For every POI, define an OpenDocument URL (for pop-up windows) field in the report block. Multiple URLs must be separated by a ‘||’, as in the following example:

```
OpenDocURL1||OpenDocURL2||OpenDocURL3
```

The Open Document URL in the table is defined in the following format:

```
iDocID=<identifierValue>&sIDType=CUID&sType=wid&sReportName=<ReportName>&sRefresh=Y&sReportPart=<ReportPartName>&lsS[Name]="<value>"
```

Note

The OpenDocument URL parameters (mentioned in the above syntax) are explained the following topic: Linking Web Intelligence Reports to Other Documents on the BI Platform Server [page 42]

**Example: A valid OpenDocument URL**

```
iDocID=AdvPOc3AnzxGq85hQ2hmTNA&sIDType=CUID&sType=wid&sReportName=Charts&sRefresh=Y&sReportPart=Margin&lsSCity="+[City]+"
```

The user will be able to view multiple successive report elements by sliding a finger to the right in the pop-up window for a POI on the mobile device.

Note

- If the OpenDocument URL for a POI is not defined in the valid format, the application ignores the URL value for the POI.
- All of the OpenDocument URLs configured for a POI (separated by ‘||’) should be consistent in format. Each URL should include all the parameters as shown in the URL format above.

**Related Information**

To Configure the Conditional Formatting for a Geo Analysis Chart [page 61]
To Configure Multiple Measures for each POI in a Geo Analysis Chart [page 62]
4.1.16.1.1 To Configure the Conditional Formatting for a Geo Analysis Chart

In some scenarios, you may want the points of interest (POIs) in geo analysis to be color-coded based on their respective measure values. For example, assume that the POIs in your Geo analysis represent the sales revenue of a company across its various outlets or locations in the world. You want the following conditions:

- Under-performing outlets appear in red. These locations have the sales revenue values below a threshold value.
- Medium performers appear in yellow. These locations have the sales revenue values within a defined range.
- Exceptional performers appear in green. These locations have the sales revenue values above a threshold value.

**Note**

The size of image icon (bubble) representing a POI is governed by the measure value corresponding to the POI.

1. Open a Web Intelligence document in **Design** mode.
2. In the measure column of the vertical table, apply conditional formatting that defines the threshold values for under, average, and exceptional performance. If there are multiple measures in the table, apply conditional formatting to each measure column.

3. Right-click the vertical table and select **Format Table**.

4. In the **General** section, append `ca1` (conditional alert syntax) to the existing geo analysis chart syntax in the **Name** text box.

   For example, if the **Name** is `map_lt3_lo4_poi2_od5`, then you need to update the name to `map_lt3_lo4_poi2_od5_ca1`.

   To disable the alert colors in geo analysis, add `ca0` in the **Name** syntax (using the example above, the **Name** syntax would become `map_lt3_lo4_poi2_od5_ca0`).

5. Save the changes in Web Intelligence and refresh the report on the mobile device.

**Related Information**

To Configure a Vertical Table in a Web Intelligence Report for use in Geo Analysis [page 59]

Geo Analysis Charts for Mobile Devices [page 57]

### 4.1.16.1.2 To Configure Multiple Measures for each POI in a Geo Analysis Chart

You can configure a geo analysis chart so that when users tap a POI, they can view values of all the measures for the POI.

1. Open a Web Intelligence document in **Design** mode.

2. Right-click in the vertical table that you are using for Geo analysis and select **Format Table**.

3. In the **General** tab, add the `gp1` syntax to the existing Geo analysis chart syntax in the **Name** text box.

   For example, if the name is `map_lt3_lo4_poi2_od5`, you would modify it to be `map_lt3_lo4_poi2_od5_gp1`.

4. Save the changes in Web Intelligence and refresh the report on the mobile device.

**Related Information**

To Configure a Vertical Table in a Web Intelligence Report for use in Geo Analysis [page 59]

Geo Analysis Charts for Mobile Devices [page 57]
4.1.16.1.3 To Configure the Display of a Specific Geographic Region for a Geo Analysis Chart

For the following task, let’s assume that you want to analyze the Indian zone on the world map, therefore you want only that region to appear when the Geo analysis chart is loaded onto the mobile device.

The following task shows how to configure this, using the Indian zone as the example region.

1. Open a Web Intelligence document in Design mode.
2. Right-click in the vertical table that you are using for Geo analysis and select Format Table.
3. In the General tab, add the latitude and longitude value syntax to the existing Geo analysis chart syntax in the Name text box.

   For example: `map_lt(n)_lo(n)_poi(n)_od(n)_LaMax(val)Min(val)_LoMax(val)Min(val)`

   ![Note]
   In the example, (n) is the column number of the table and (val) denotes the value of longitude and latitude. The values can also be negative based on the POI location on globe. For example, if the table name is `map_lt3_lo4_poi5_od6_imu7`, the maximum is `[latitude, longitude]= [37, -104]`, and the minimum is `[latitude, longitude]= [30, -180]`, you can set table name as follows: `map_lt3_lo4_poi5_od6_imu7_LaMax37Min30_LoMax-104Min-180`

4. Save the changes in Web Intelligence and refresh the report on the mobile device.

Related Information

To Configure a Vertical Table in a Web Intelligence Report for use in Geo Analysis [page 59]
Geo Analysis Charts for Mobile Devices [page 57]

4.1.16.1.4 To Configure the Display of Information for a Default Dimension Value for a Geo Analysis Chart

When the Geo analysis chart opens on the mobile device, you may want it to display information based on a specific dimension value by default.

You can define this default dimension value while configuring the Web Intelligence vertical table.

1. Open a Web Intelligence document in Design mode.
2. Right-click in the vertical table that you are using for Geo analysis and select Format Table.
3. In the General tab, use the following syntax in the Name text box:

   ```
   map_lt(n)_lo(n)_poi(n)_od(n)_dname<DimName>*_dval<DimValue>*;
   ```

   Where:

   `<DimName>` is the dimension name
<DimValue> is the dimension value according to which you want to display POIs in the default view of a Geo analysis chart. For example, dnameQuarter*_dvalQ1*:

i Note
The delimiter '*' is a mandatory part of the syntax.

4. Save the changes in Web Intelligence and refresh the report on the mobile device.

Related Information

To Configure a Vertical Table in a Web Intelligence Report for use in Geo Analysis [page 59]
Geo Analysis Charts for Mobile Devices [page 57]

4.1.17 Highlighting data using Conditional Formatting

Conditional formatting (alerters) in Web Intelligence documents enables you to highlight results or change formatting based on data. You can, for example, conditionally format results to highlight particularly high or low results with specific colors or with text comments, such as "High Performer" or "Low Performer".

You can apply conditional formatting to the following elements:

- Columns in a vertical table
- Rows in a horizontal table
- Cells in forms and cross-tables
- Section headers
- Free-standing cells

You can apply up to 30 conditional formatting rules in a document. You can apply up to 10 different rules on a single table column or row, free-standing cell, or section cell.

You can define conditional formatting rules to activate the following formatting changes:

- text color, size and style
- cell border colors and style
- cell background display — specific colors, images, or hyperlinks to web pages

i Note
In Web Intelligence, when you modify the format of the cell border or text size and style, conditional formats are affected as well. However, these table aspects are not yet implemented in the SAP BI application.

For more information on conditional formatting, refer to the Web Intelligence online help or user guides, which are available in the Analytics section on the SAP Help Portal (http://help.sap.com/analytics).

i Note
When Web Intelligence documents with conditional formatting are refreshed on the BI platform server, SAP BusinessObjects Mobile provides users with explicit alerts on user’s device screen.
However, to receive and view alerts on BI documents, users first need to subscribe to receive them using the BI document’s information (‘i’) screen in the app. They should also have the appropriate subscription rights granted to them by the administrator on the BI platform.

4.1.18 Troubleshooting

This section offers you solutions to some typical design problems you may encounter while working on Web Intelligence reports for mobile devices.

Some charts appear smaller than others on the mobile device screen, even though they are the same size in the source Web Intelligence document.

In the Web Intelligence report in Page mode, the charts are actually spread across two pages. SAP BusinessObjects Mobile always displays the report blocks only in the page of origin. Size is determined by the ratio of report block in the page of origin.

One particular chart appears stretched vertically on the mobile device screen, even though I have placed all charts at the bottom in one horizontal line in the Web Intelligence report.

When you placed the table in the report, there was empty space left between the bottom of the table and bottom of the page. On the mobile device screen, the chart is stretched to the bottom of the mobile screen so as to utilize the screen space.

My free-standing cell is not aligned with other report elements on the mobile device, even though I have placed them in the same horizontal line in the Web Intelligence report.

If there is blank space left above a free-standing cell in the report, then SAP BusinessObjects Mobile tries to utilize this space by stretching the report parts present on the side of the screen.

To resolve this problem, move the free-standing cell to the top of the report body, even if it is positioned above the other report elements.
The logo located at the top, right corner of my report is moved to second page on the mobile device screen, even though I have placed the logo just above the chart in the report.

You may have placed the logo on space that SAP BusinessObjects Mobile considers the next page. You will notice this if you view the report in Web Intelligence in Page mode.

To resolve this problem in the report, move the logo enough to the left so that SAP BusinessObjects Mobile considers it on page 1. You can check this by viewing the report in Page mode.

Free-standing cells in my Web Intelligence report do not appear on the mobile device.

The document is assigned to the ‘Mobile’ category, but not the ‘MobileDesigned’ category. For a free-standing cell to appear on the mobile device screen, you also need to assign the Web Intelligence document to the ‘MobileDesigned’ categories.

One of the free-standing cells in the document appears with a different height on the mobile device screen.

The cell is configured to be displayed in the Card layout.

To resolve this problem, remove the `laction` syntax in the free-standing cell and unselect the Read Content As Hyperlink option in the free-standing cell properties.

Related Information

- Using Free-Standing Cells in Web Intelligence Reports for Mobile Devices [page 28]
- Creating Effective Web Intelligence Report Layouts for Mobile Devices [page 21]
- Constraints of Web Intelligence Report Parts on Mobile Devices [page 35]

4.2 Designing SAP Crystal Reports for Mobile for iOS Application

The Crystal Reports format on an iOS device is optimized for the printer output, not the form factor of the device. If you design your report to be useable when exported to PDF, then it will also be usable on a mobile device.
Start by designing your reports to work with a page format of 8.5 by 11 inches (the North American Letter format), and then adjust the aspect ratio if necessary. The aspect ratio of the Letter page size is similar to the aspect ratio of an iPad.


### 4.2.1 Configuring Categories on the Mobile Server

A category is a logical classification of BI documents (objects). BI documents are assigned to categories on the BI platform. In the context of Mobile BI, categories help to control various aspects of the BI documents accessed via the SAP BI applications on mobile devices.

These aspects include:

- Controlling the user accessibility of BI documents:
  - Defining the specific devices on which a BI document can be accessed.
  - Preventing confidential documents from being saved to the user’s device memory.
- Customizing the display layout of BI documents on the mobile device screen. (The display layout of BI documents on the device screen can be based on the Card Layout or Page Layout model).
- Organizing BI content based on your specific requirements.

Category names are configured in the mobi.properties file on the Mobile server at the following location:

```
 [<WebAppServer>_Home]\webapps\MobileBIService\WEB-INF\mobi.properties
```

There are three types of technical categories that you can assign a BI document to in the document designing tool on the BI platform:

1. Category to allow the BI document to be displayed and accessed on the mobile device.
   (In the default setting, this category is called “Mobile”).
2. Category to ensure that the report layout on the device screen is the same as the “page layout” defined on the BI platform.
   (In the default setting, this category is called “MobileDesigned”).
3. Category to secure the document. Documents assigned to this category cannot be downloaded and saved to the user’s device memory. They can be only be accessed while being connected to the server.
   (In the default setting, this category is called “Confidential”).

The snippet below displays the default configuration of mobi.properties file on the mobile server:

```
#default
........
default.corporateCategory=Mobile
default.personalCategory=Mobile
default.category.mobileDesigned=MobileDesigned
default.category.secure=Confidential
default.docTypes=Webi,CrystalReport
........
```
#ipad
......
ipad.corporateCategory=Mobile
......

#iphone
......
iphone.corporateCategory=Mobile
...

#blackberry mobile
...

#android tablet
androidtablet.corporateCategory=Mobile
...

#android phone
androidphone.corporateCategory=Mobile
....

The mobi.properties file contains various sections based on request sources such as default, iphone, ipad, blackberry mobile, androidphone and androidtablet.

All the properties in the default request source govern various aspects of SAP BI applications on ALL mobile devices. Only when different parameter values are entered in a device based request source, the new values OVERRIDES the default request source.

For your day-to-day work, you do not need to change the default settings in the properties file. However, if you have specific requirements for a particular device or platform, you can enter specific category names in the corresponding request source. These values will override those in the default request source.

In the mobi.properties file:

1. The lines:
   <RequestSrc>.corporateCategory=Mobile
   <RequestSrc>.personalCategory=Mobile
imply that BI documents assigned to the {Mobile} category can be accessed via the SAP BI (SAP BusinessObjects Mobile) application on a mobile device.

2. The line:
   <RequestSrc>.category.mobileDesigned=MobileDesigned
implies that BI documents assigned to the MobileDesigned category (on the BI platform) would appear on the mobile device screen in accordance with the report’s page layout defined on the BI platform.

3. The line: <RequestSrc>.category.secure=Confidential implies that BI documents assigned to the Confidential category on the BI platform are secured. Documents assigned to this category cannot be saved to the user’s device memory, and therefore cannot be accessed in disconnected (offline) mode.

Note:
On the BI platform, you can change (customize) the category names that you see to the right of the assignment operator (such as "Mobile", "MobileDesigned" and "Confidential") in the mobi.properties file. However, if you change a category name on the BI platform, you should update the corresponding line in the mobi.properties file accordingly.

The categories of the type:mobileDesigned and secure, cannot be Personal categories. They are of Corporate type.

If you have any of the following server versions installed in your enterprise environment, see the corresponding guides for configuring categories on the Mobile server:

- For Mobile Server 4.0 SP05, see: https://websmp203.sap-ag.de/%7Esapidb/011000358700001280592012E/xi4sp5_mob_inst_deploy_en.pdf
- For Mobile Server 4.0 SP06, see: http://service.sap.com/%7Esapidb/011000358700000442372013E/xi4sp6_mob_inst_deploy_en.pdf
- For Mobile Server 4.1, see http://service.sap.com/%7Esapidb/011000358700000508552013E/sbo41_mob_inst_deploy_en.pdf

4.2.2 Grouping and Sorting Interactive Crystal Reports

In many reports, you need to separate the data into groups in order to make it easier to read and to understand. You may also want to sort the data so that it is easier to locate specific records in the report. Crystal Reports allows you to group and sort report data in a variety of ways, providing a great deal of flexibility for customizing reports.

On the Crystal Reports designer, click Structure to return to Structure mode.

1. On the Insert tab located above the report canvas, select Group.
   A panel of options appears below the Group button.
2. In the list on the left side of the panel, select Customer.Region.
   This list is used to specify the data on which to base the group.
3. Select Ascending.
   This option is used to specify the sort order of the groups. "Ascending" sort order means that the groups will be placed in order from the smallest value to the largest value (A to Z, 1 to 9).
4. Select Insert.
   Two new sections appear on the report canvas: Group Header 1 and Group Footer 1. This is how the program shows that the report has been grouped.
   Notice the group name element in the Group Header section. This element is a live header, which is explained in the next section.
5. Select Page to view the report in Page mode.
The report should look similar to this:

6. From the side panel, click the Group Tree icon to see a tree view of the groups that are in the report. The Group Tree lets you quickly jump to a specific group of interest instead of scrolling through the report looking for the group. For example, to see the Texas customer group, select TX in the Group Tree. The program jumps to the Texas group and displays it.

Note
- One of the main reasons for grouping data is to total or summarize each group of records instead of all the records in the report.
- For more information on how to design reports, see http://help.sap.com/businessobject/product_guides/sbo41/en/sbo41sp3_crj_usergde_en.pdf

4.3 Designing SAP BusinessObjects Dashboards for Mobile for iOS Application

SAP BusinessObjects Dashboards allows dashboard consumers to view models on mobile devices such as the iPad. Certain components and dashboard features are unavailable or behave differently on mobile devices. You can use the “Mobile Compatibility” panel to ensure that your model will run correctly on mobile devices.

Add-on components created using the Dashboards Component SDK can be made mobile-compatible. For more information, refer to the Dashboards Component SDK documentation, available on the SAP Help Portal (http://help.sap.com/bodash41).

Note
Dashboards content type is supported only on iPad 2 and above.
4.3.1 Constraints on Dashboard Reports

A dashboard which runs properly in PC might overwhelm a mobile device due to the capacity limitation. There are certain limitations on size and other aspects of report parts when viewing a BI report on an iPad or an iPhone device.

- Limit the number of components/Cells/formula:
  - No more than 30 resource-consuming components (Scorecard, List view, charts, etc.)
  - No more than 4000 embedded Excel cells
  - No more than 2000 formula
- Leave as much calculation logic as possible to server
- Avoid array calculations as they reduce the application performance.
  For example: SUM, COUNT, SUMIF, COUNTIF, INDEX, MATCH, HLOOKUP, VLOOKUP, etc
- The recommended minimum touch size is 44 pixels.

4.3.2 Configuring Dashboards Reports to View on the Mobile Device

You can set the Dashboards to view on the mobile device by setting the Dashboards to mobile-ready in the SAP BusinessObjects Dashboards.

To set the Dashboards to mobile-ready, perform the following steps:

1. Launch the Dashboard application in desktop.
2. Create/Modify the Dashboard report
   - For more information on how to create Dashboards, see <link>
3. Select File > Save to Platform.
4. If you want to view the Dashboards report only on mobile device, select Mobile.
5. If you want to view the Dashboards report only on desktop, select Desktop.
6. If you want to view the Dashboards report on both mobile device and desktop, select Desktop and Mobile.
4.3.3 Configuring the Dashboard Document properties

As a Dashboards report designer for mobile, you can configure document properties such as canvas size and font type for Dashboards report.

You can configure the Dashboards document properties for the iOS mobile device, perform the following:

1. Open the Dashboard report in the application. Alternatively, you can also launch the SAP BusinessObjects Dashboards application and open the desired dashboard.
3. Set the canvas size in pixels to 1024 x 768.
4. To change the Dashboards report font type, select Global Font and choose a font type form the drop-down list.
   
   ![Document Properties](image)

   **Note**

   You can set the font type for the Dashboards report either in document properties or in per component. For both desktop and mobile device, Dashboards report supports the following font types:
   - Arial
   - Courier New
   - Georgia
   - Times New Roman
   - Verdana

5. Select Ok.

4.4 Designing SAP BusinessObjects Analysis Applications for Mobile for iOS application

SAP BusinessObjects Design Studio enables application designers to create analysis applications and dashboards - based on BW, SAP HANA and universe data sources - for browsers and mobile devices (iPads,
SAP BusinessObjects Design Studio can be used locally and integrated in the following platforms:

- SAP BusinessObjects Business Intelligence (BI platform)
- SAP NetWeaver

**Note**

In local mode, you can create demo analysis applications for evaluating SAP BusinessObjects Design Studio with users at customer locations.

In addition to the standard palette of components in Design Studio, which are used to visualize data and enable user interaction, you can develop 3rd party components with the Design Studio SDK and enhance your analysis applications with custom components. Using SAP BusinessObjects Business Intelligence as your Design Studio platform, you can store and provide access to the analysis applications containing the 3rd party components.

### 4.4.1 Configuring the BI Platform for Display of Analysis Application on iOS Mobile Devices

Before application users can see analysis applications on their iOS mobile device (using the SAP BusinessObjects Mobile solution), you need to change a property in the zen.properties file on the BI platform server.

1. On the BI platform server, navigate to the `<SAP BusinessObjects Installation directory>\Tomcat\webapps\MobileBIService\WEB-INF\classes\internal\zen.properties` file.
2. Set `document.supported.devices` property value to iPad, iPhone. For example:
   
   `document.supported.devices=ipad,iphone`

3. Stop the Tomcat server.
4. Clear the cache of the Tomcat server.
5. Restart the Tomcat server.

### 4.4.2 Recommendations for Creating Analysis Application for iPhones

When creating mobile analysis applications for an iPhone, note the following SAP recommendations:

- Keep the applications simple and do not use too many components.
- Only create applications based on the predefined templates for iPhones (do not use the blank template for iPhones). In the New Application dialog box, select iPhone as the target device. In the next step, select a predefined iPhone template (for example, iPhone Template 1).
4.5 Designing SAP BusinessObjects Explorer Information Spaces for Mobile for iOS Application

SAP BusinessObjects Explorer is a data discovery and visualization tool. You use pre-defined datasets called Information Spaces and associated Exploration view sets to explore, visualize, and analyze corporate data.

You explore your data using keyword searches for information spaces or exploration view sets that contain the most relevant data to answer a business question. An information spaces contains data organized in facets, and its associated exploration view sets allow you to visualize the data using multiple charts optimized for the type of data being explored.

**Note**

- Supported Explorer content types on iPad device – Information Space, Exploration View
- Supported Explorer content types on iPad device - Information Space
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