XSL Report Designer V2.5

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Introduction

This chapter provides an overview of the purpose, workflow, features and system requirements for Antenna House XSL Report Designer.

1 Purpose

Antenna House XSL Report Designer is for the designing of output layouts that can then be used to take XML data and generate print or PDF reports and forms by using XSL-FO and Antenna House XSL Formatter or AH Formatter. The output layout design contains the relationship of each element of XML content and how it should be placed, formatted and processed in the final report or form.

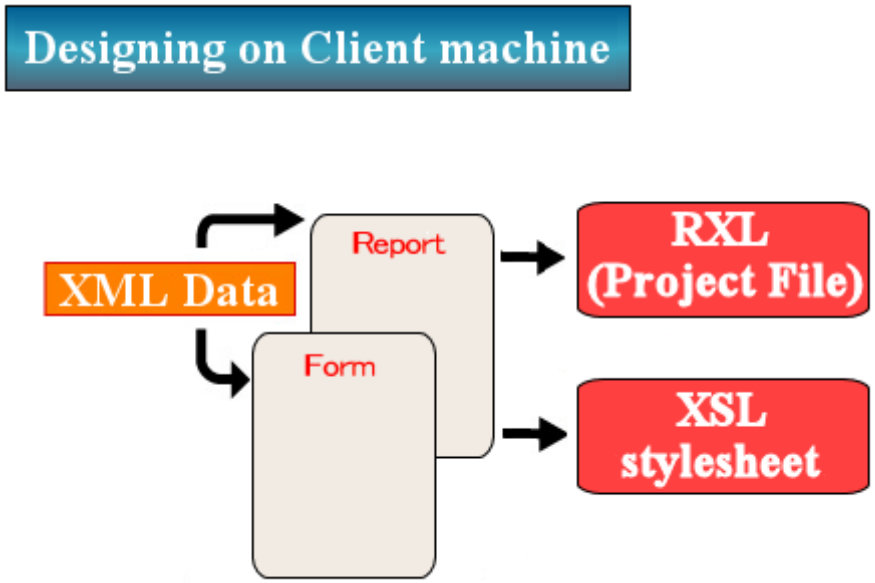
XSL Report Designer is based on the XSL-FO standard and conforms to the W3C Recommendation for Extensible Stylesheet Language (XSL-FO) Version 1.0 and 1.1. XSL Report Designer uses several extensions developed by Antenna House for XSL Formatter or AH Formatter to handle some of the complex formatting requirements. XSL Report Designer also uses XSL Formatter's GUI or AH Formatter's GUI to proof the forms and merged XML content. Thus, to take full advantage of XSL Report Designer Antenna House XSL Formatter V4.0 or later, or AH Formatter V5.0 or later is required to process/format the XSL-FO.

2 Workflow

The following explains the workflow from the designing of the layout with XSL Report Designer to generating the final format and output of the report with XSL Formatter or AH Formatter.

Step1. Design the report

XSL Report Designer's intuitive Graphical User Interface (GUI) on Windows offers a true WYSIWYG (what you see is what you get) for creating the report or the form layout interactively. The designed content is saved as a Project File (extension is ".rxl") . You can also save it as an XSL stylesheet (extension is ".xsl") .

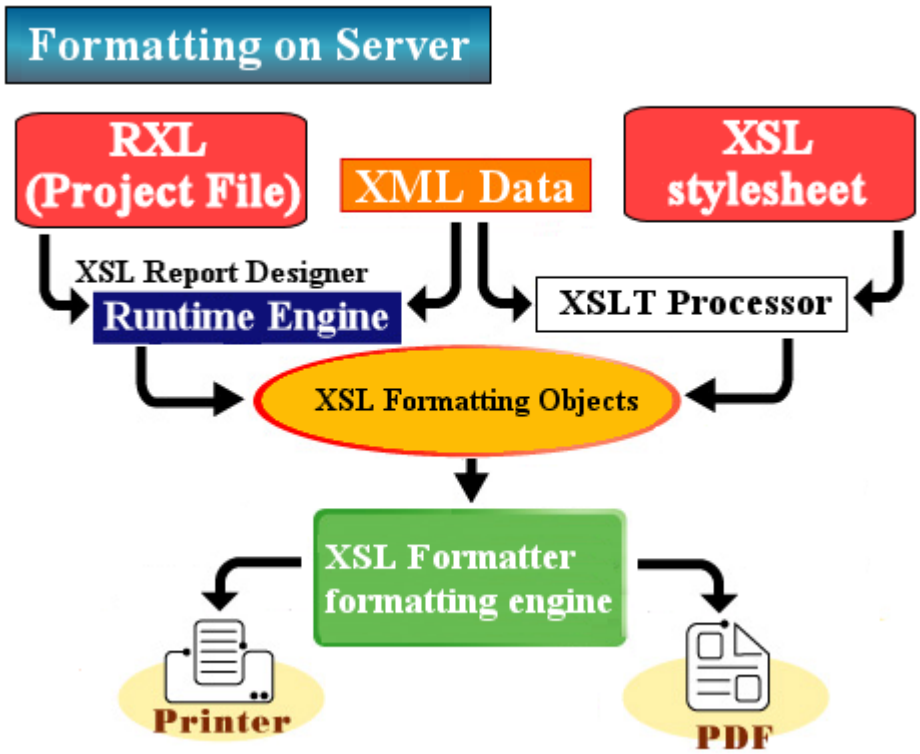


Step2. Create XSL-FO with Runtime Engine or XSLT software

To create an XSL-FO file XSL Report Designer comes with a separate Runtime Engine that is used to process the XML data by using the Project File designed in Step 1.

Report Designer also enables a layout to be saved as an XSL file. By using an XSLT processor the XML data can be transformed using the XSL stylesheet to generate XSL-FO.

Later in this document we will discuss the limitations surrounding the use of XSLT and the advantages of the Project File and Runtime Engine.



Step3. Format the XSL-FO with XSL Formatter or AH Formatter

The final step is taking the XSL-FO and using XSL Formatter or AH Formatter to create a file for screen display, paper output or PDF.

3 Features

The following are some of the main features of XSL Report Designer:

- Requires no knowledge of stylesheets or programming to design reports and forms from XML data.
  To print XML data in forms and reports does not require the design of complex stylesheets and programs. To design a form now requires the simple use of a mouse and GUI to associate and layout the data for the report.

- Supports three layout types.
  With Report Designer you have three layout types to choose from; Fixed layout for rigid forms, Flow layout for forms that have expanding fields to accommodate the data and Label layout for multiple forms (labels) on a page.

- Set complex formats and the expressions easily.
  Complex processing can be specified and executed easily with the wide range of format specifications and built-in functions (string manipulation, total processing, conditional judgment, xpath specification, etc.) easily accessible from the GUI.

- Generate XSL stylesheets. (V2.0)
  XSL stylesheets can automatically be generated from the Project File. Then a standard XSLT processor can be used to convert the XML data to XSL-FO.

- Supports the use of TSV/CSV data. (V2.0)

Existing TSV (Tab Separated Values) / CSV (Comma Separated Values) files can now be formatted the same as XML files. Using Report Designer a Project File can be created to format TSV/CSV files the same as if they were XML data.

- Possible to use PDF file as a draft design. (V2.5)
  When you design the layout of your file, an existing PDF file can be used as a base draft. By doing this, you can easily design the layout of the same design as your existing PDF form. It is also possible to output the PDF used as a base draft together with data as background image.

- Possible to change the properties of objects dynamically. (V2.5)
  You can change the properties of objects(e.g. text color etc.) dynamically according to the data when printing and outputting a PDF file.

- Comes with a separate Runtime Engine to create XSL-FO.
  The Runtime Engine is used to transform XML data to XSL-FO based on the specifications contained in the Project File. The Runtime Engine supports a wide range of functions beyond what could be achieved with XSLT. The Java Interface of the Runtime Engine is designed to enable the construction of systems that require server side printing of reports. A command line interface is also available.

4 System Requirements

XSL Report Designer（GUI）	Windows XP SP3 or later, Windows Vista SP1 or later. Display: 16-bit color or higher Memory: 512MB or higher
Runtime Engine	Java SE (Java Platform, Standard Edition) 1.5.0 or later, or JRE (Java Runtime Environment) 1.5.0 or later Memory: 512MB or higer

- To generate XSL-FO with an XSL stylesheet from Report Designer requires a separate XSLT processor. The XSLT processor is not part of the product, but several are freely available. Antenna House has tested Report Designer with both MSXML from Microsoft and Saxon from SourceForge.

- The generation of XSL-FO requires a Java environment, "Antenna House XSL Formatter V4.0" or later, or "Antenna House AH Formatter V5.0" or later is necessary to create the screen display (preview), print and PDF output. Please refer to our Web site about the system requirements of Antenna House XSL Formatter or AH Formatter.

- "XSL Formatter Barcode Option", or "AH Formatter Barcode Option" is required to print barcodes. "XSL Formatter Barcode Option" or "AH Formatter Barcode Option" is available only for Windows.

5 Additional information and technical support

For additional information and technical questions about XSL Report Designer please contact us at the following e-mail.

Technical inquiries:
e-mail : designer@antennahouse.com

Sales, pricing and licensing:
e-mail : info@antennahouse.com

Basic concept

This chapter explains the basic concept behind XSL Report Designer and how it produces a print layout.

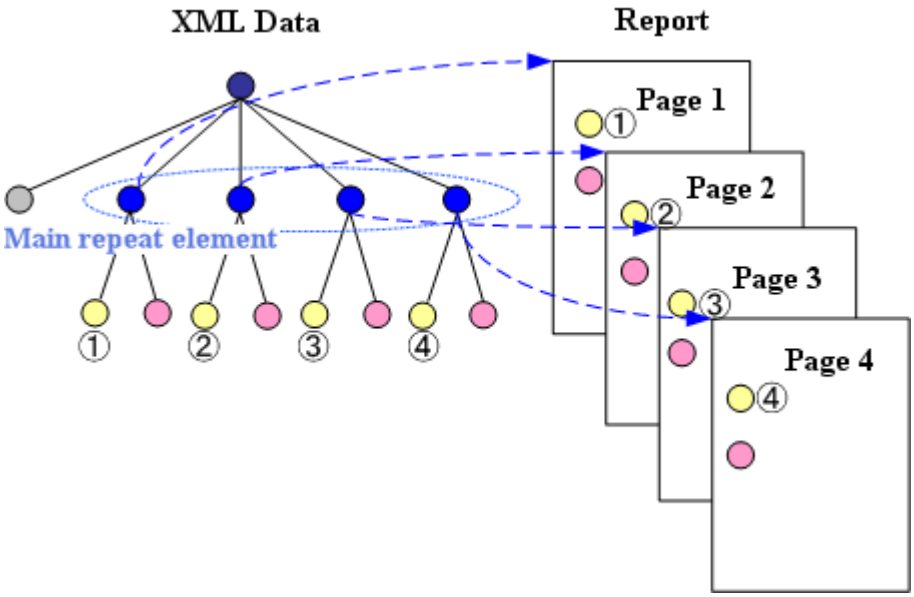
6 Structure of XML data and the correspondence to the print layout of the form or report

XSL Report Designer creates a layout design for printing predefined forms and reports containing XML data. The XML data for printing is assumed to have a constant repetition pattern in the tree structure. It is not possible with XSL Report Designer to design a layout for documents such as general books and technical manuals because they do not have a constant repetition pattern within tree structure of their XML data.

XSL Report Designer matches the repetition pattern of the XML data to the repetition pattern in the print layout of the form or report. To do this XSL Report Designer supports three types of print layouts; Fixed type, Flow type and Label type. Let's take a look at how XSL Report Designer relates the repetition pattern of the tree structure of the XML data to the repetition pattern in three kinds of print layouts.

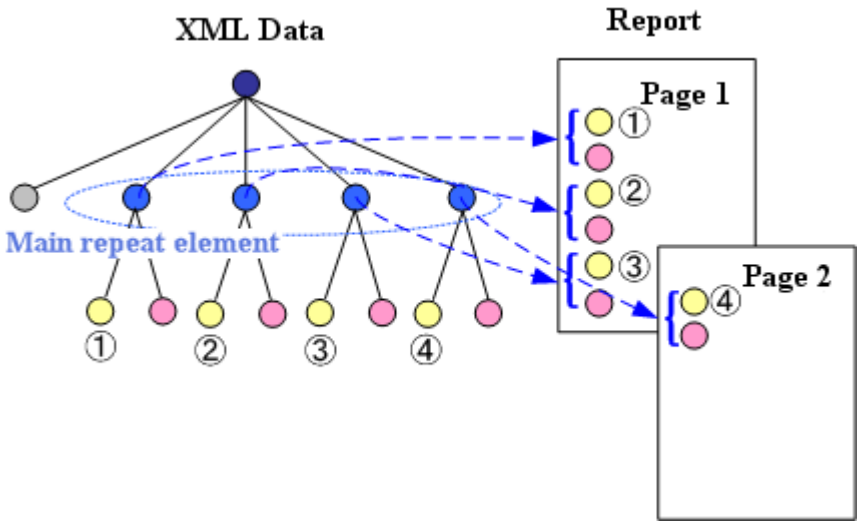
6.1 Fixed type (used for predesigned fixed forms)

The Fixed type layout pattern repeats the same pattern on each page or group of pages as shown in the figure. Thus, one repetition of the XML tree is applied to one page or group of pages in the final formatted output. In the XML tree the element at the first position of the overall report or form is considered the main repeat element. Whenever the main repeat element appears in the XML data a new page or group of pages is created in the report.



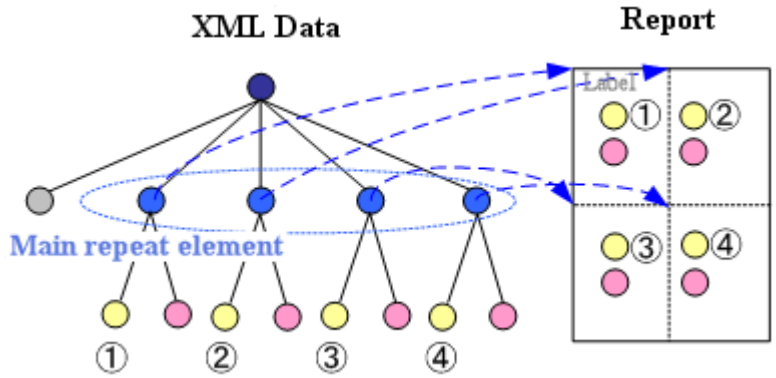
6.2 Flow type (used for reports and dynamic forms such as invoices and statements)

The Flow type layout pattern is used when the XML data contain elements that are repeated multiple times in the XML tree. The fields or pages in the report expand to accommodate the XML content onto the paper as shown in the following figure. In the Flow type the limits of the page are not set by the unit of the repetition.



6.3 Label type

The Label type divides the paper into user defined units, as shown in the following figure, called labels. The same output pattern is repeated label by label by starting each new label at the main repeat element.



7 How XSL-FO is generated and printed from XML data

The layout that XSL Report Designer designs is called the "Project" and the information about the design is preserved as a Project File.

The building blocks XSL Report Designer uses for a design are called "Objects." Though there are various kinds of objects, the one most frequently used is a text object. Using the text object as an example, let's take a brief look at how the process works.

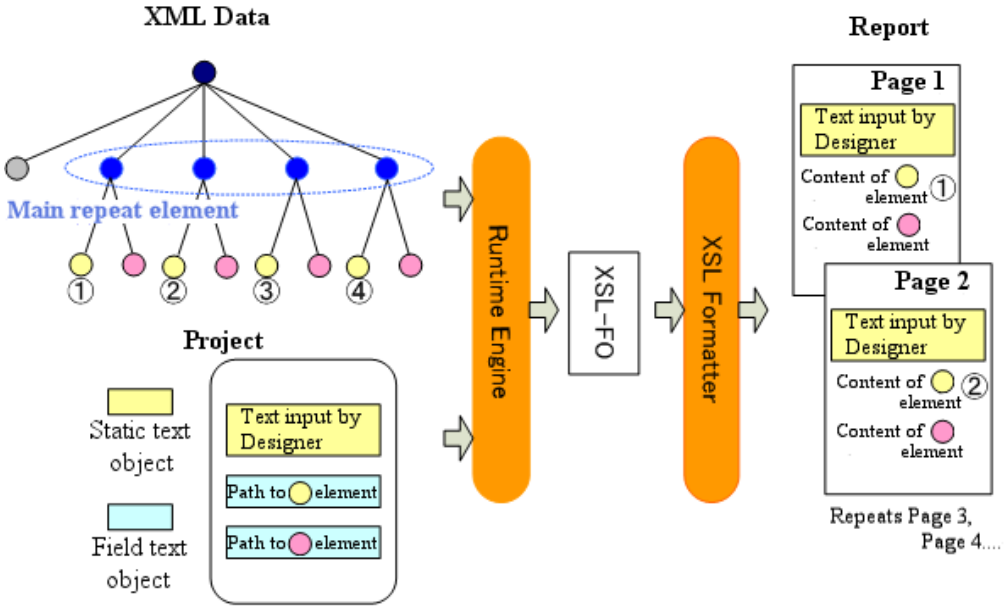
In XSL Report Designer text objects are not concrete text character strings such as in DTP and word processors. Instead the text objects are like an empty containers that ultimately will have text placed into them.

The text object supports two different kinds of text, "Static" and "Field." For the static text object the text character string is input through XSL Report Designer's GUI. For the field text object text is flowed into the object by setting the path to the element of data to be printed (this is called the "XML path") .

The Runtime Engine bundled with XSL Report Designer then takes the XML file to be printed and the project file that describes the desired layout and generates XSL-FO. Within the generated XSL-FO the static text object in the layout now becomes a block object (fo:block). As for the field text object, the content of the element specified

by "XML path" is also output as the content of a block object (fo:block). The resulting XSL-FO file is then input to XSL Formatter or AH Formatter to produce the final print and PDF files.

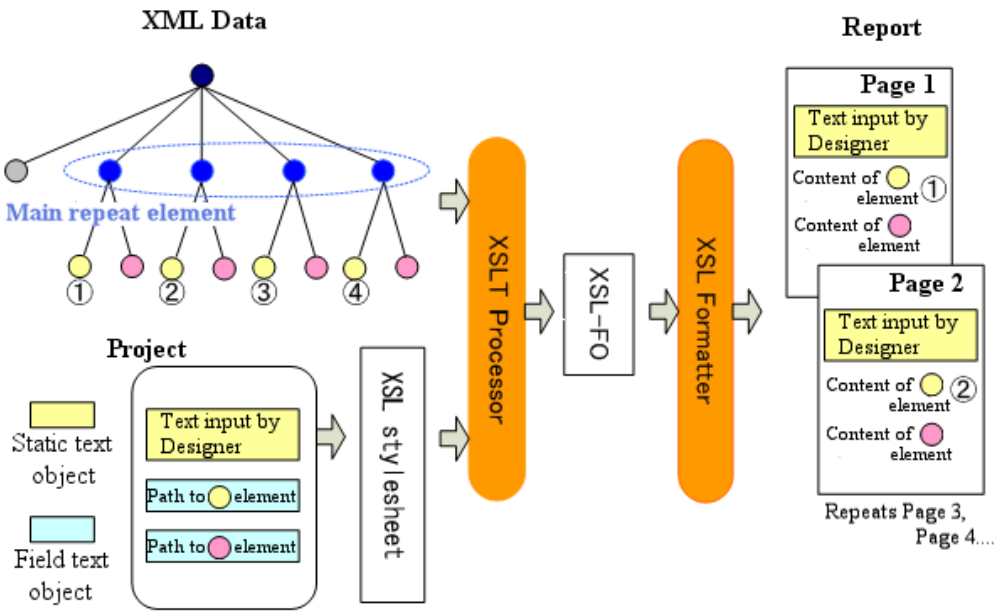
It's important to note that the tree structure of the XML data is reflected in the XSL-FO that the Runtime Engine outputs. The main repeat element is outputted in XSL-FO along with subordinate elements in the XML tree. This process is repeated based on the number of times the main repeat element appears in the XML data.



7.1 Using a XSL stylesheet

XSL Report Designer can generate a XSL stylesheet from the project file.

When a XSL stylesheet is generated from the project the XML data and the XSL stylesheet are then submitted to an XSLT processor. The XSLT processor then outputs XSL-FO. The properties in the XSL-FO are the same as those generated by the Runtime Engine, but the use of XSL stylesheet has certain limitations such as not being able to use the calculation expressions set by the project file of XSL Report Designer.



8 Object

The following are the diffent kinds of Objects supported by XSL Report Designer:

- document object
- report-header
- report-footer
- repeat object
- page object
- frame object
- label object
- text object
- image object
- barcode object
- table object
- caption object
- column-info object
- table-header/table-footer object
- table-body object
- table-row object
- table-cell object

- line object

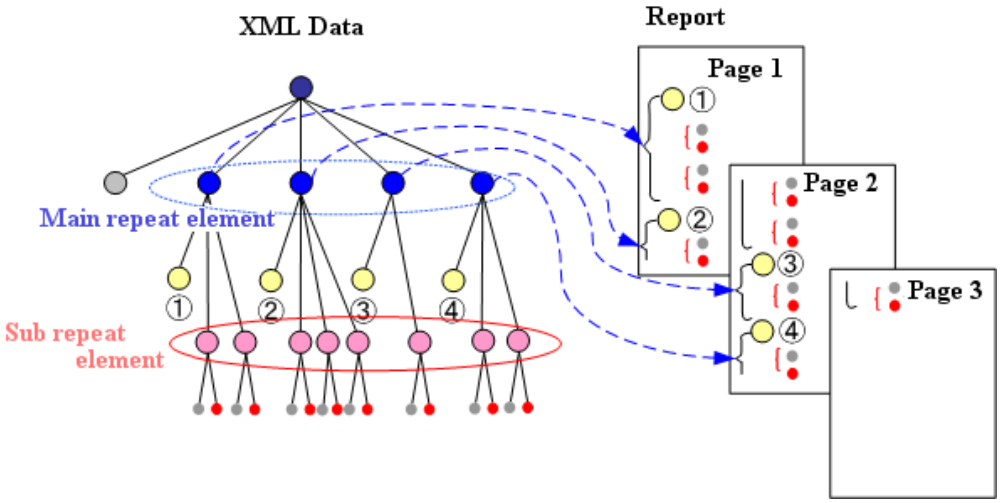
The next section explains the most important objects. Please refer to the section on "Object and Property" (page 129), in the chapter "Setting of project and object" and the chapter "Objects for layout" (page 162) for detailed information about each object. (Note: In the following explanations the word "object" is omitted when the meaning is clear.)

8.1 Document and Repeat Objects

The document object is the highest level object and contains the entire report to be printed. The entire tree structure is contained within the document object, which is the root of the tree.

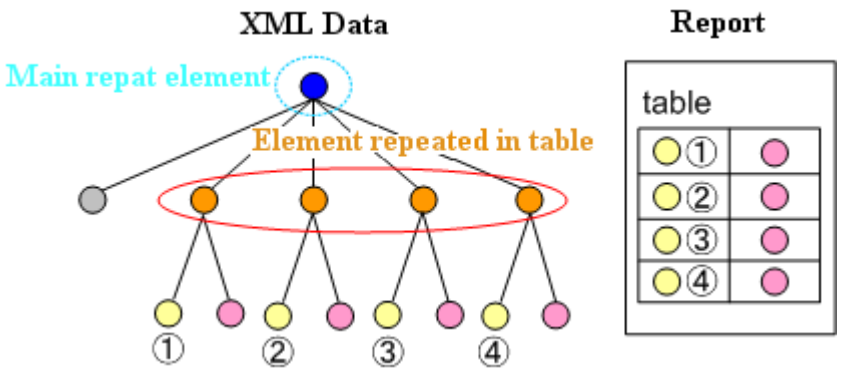
The repeat object corresponds to that part of the XML data that is repeated in the print layout of the report. For instance, the page corresponds to the repeat object when each one of the records in the data is output to one page. In XSL Report Designer the repeat object is put directly after the document object in the structure. This is then the main repeat of the project. Fixed, flow and label layouts can only have one Main repeat object. In Fixed and Flow layouts the main repeat is the only repeat object. Here you would associate the path of the main repeat to the main repeat element in the tree structure of the XML data. When the report is formatted the main repeat object and its subordinate objects will be repeated based on the number of times the main repeat element is in the XML data.

Flow type layouts can have multiple repeat objects put in subordinate positions to the main repeat. These are called sub repeat objects. The following figure illustrates the relationship of sub repeat elements within the XML data to the formatted page.



8.2 Tables

With Report Designer it is also possible to flow the repeating elements of the XML data to a table within the form by using the table object. The following is an output example of a table where the rows correspond to the repeated elements, and the cells of each row are set to output the children elements of the repeated element. The number of rows in the table is the same as the number of repetitions of the data to print.



9 Properties

"Property" is the display style, print attributes, characteristics, etc. of how objects are treated in the print layout.

For instance, the property(ies) of a text object can be the position on the page (X Y coordinates), the width and height of the object, the font, fontsizes, the character styles, the character decorations, color etc.

The Properties that can be set differ according to the object. Please refer to "Properties list" (page 206).

Getting started - A Tutorial

The purpose of this chapter is to actually guide you through the process of using XSL Report Designer to create a Project from XML data and then generate PDF!

10 First Step

This tutorial is based around a very simple XML file that we are going to create a project file for, preview the layout in XSL Formatter or AH Formatter and then finally output a PDF file. For the tutorial you will have to have XSL Formatter V4.0 or later, or AH Formatter V5.0 or later installed in order to preview and format the layout.

10.1 XML file structure

We will use sample XML data "sample-bib.xml" (included with XSL Report Designer) that makes up a very simple book list. The content of the file is as follows.

```
<?xml version="1.0" encoding="UTF-8" ?>
<bib>
 <bibinfo>
    <title>
      XSL Report Designer Sample
    </title>
    <date>
      December 6, 2004
    </date>
 </bibinfo>
 <book year="1994">
    <title>
      Arabic typography
    </title>
    <author>
      Huda Smitshuijzen AbiFar?s
    </author>
    <publisher>
      SAQI Books
    </publisher>
    <price>
      35.95
    </price>
 </book>
 <book year="1992">
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      The Story of Writing
    </title>
    <author>
      Andrew Robinson
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    </publisher>
    <price>
      19.95
    </price>
 </book>
 <book year="2000">
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    <title>
      XML Handbook 5th Edition
    </title>
    <author>
      Charles F. Goldfarb, Paul Prescod
    </author>
    <publisher>
      Prentice Hall
    </publisher>
    <price>
      49.99
    </price>
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 <book year="1999">
    <title>
      XQuery Kick Start
    </title>
    <author>
       James McGovern, Per Bothner, Kurt Cagle, James Linn, Vaidyanathan
Nagarajan
    </author>
    <publisher>
      SAMS
    </publisher>
    <price>
      34.99
    </price>
 </book>
</bib>
```
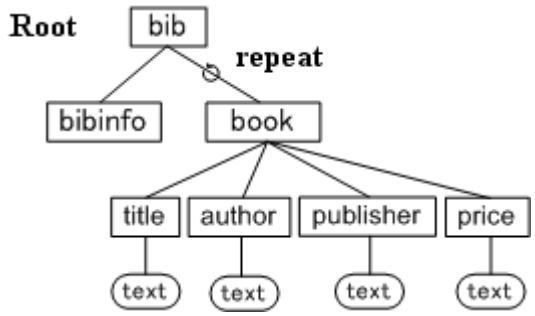
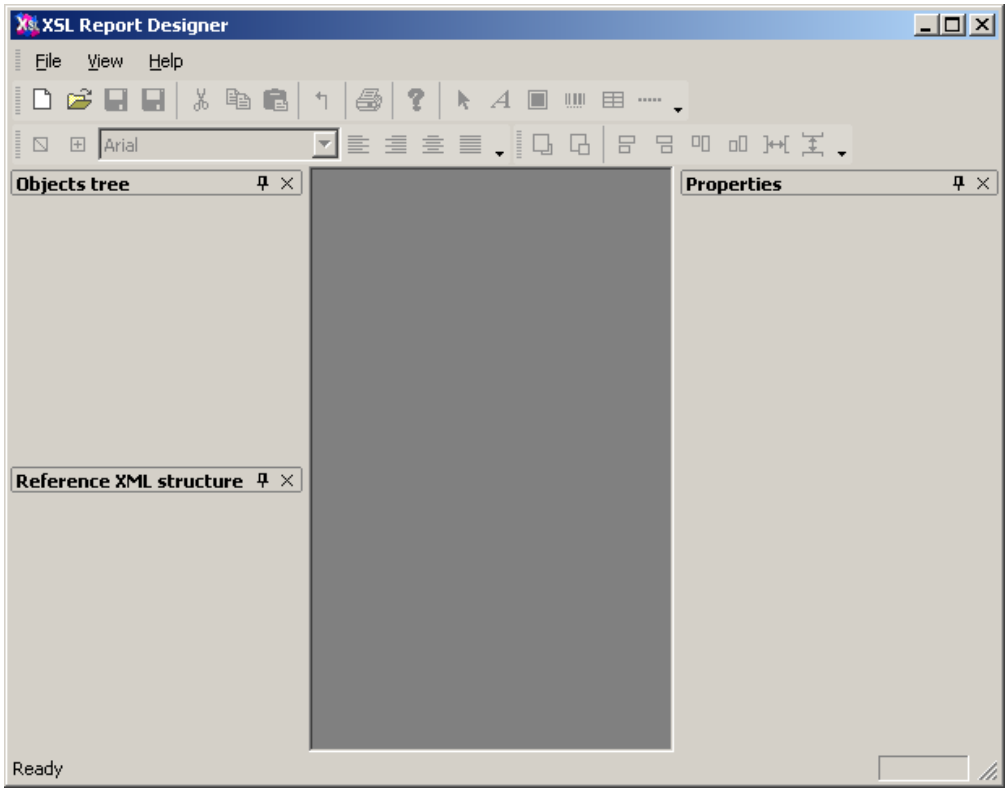

The following figure shows the tree structure of this XML data. The root element is "bib." "bibinfo" and "book" are child elements of "bib" and "book" element is repeated according to the number of books listed in the XML file. In the structure "title," "author," "publisher" and "price" appear in this order as child elements of "book." All elements from "title" to "price" contains only text in their content.

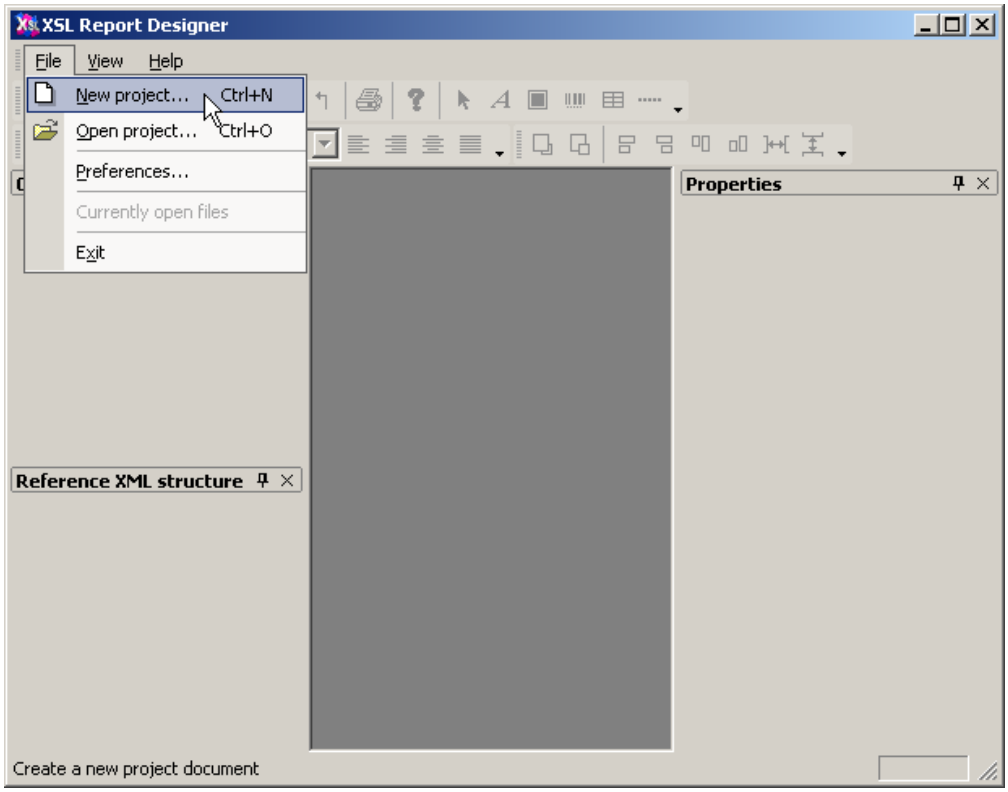


10.2 From startup to PDF

Let's first practice by outputting the content of the "title" elements of the book list (XML data) to the PDF. First of all, start XSL Report Designer. The following initial screen is displayed.

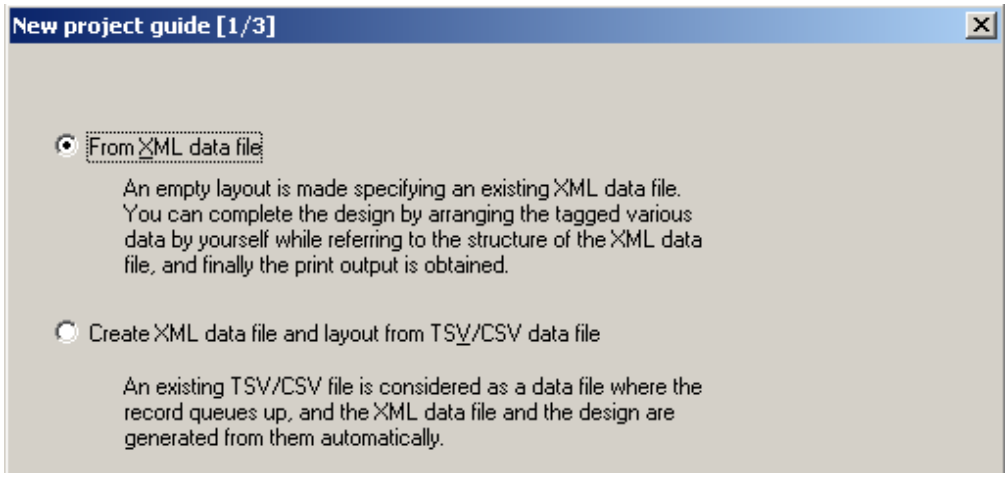


Choose New project from File menu.

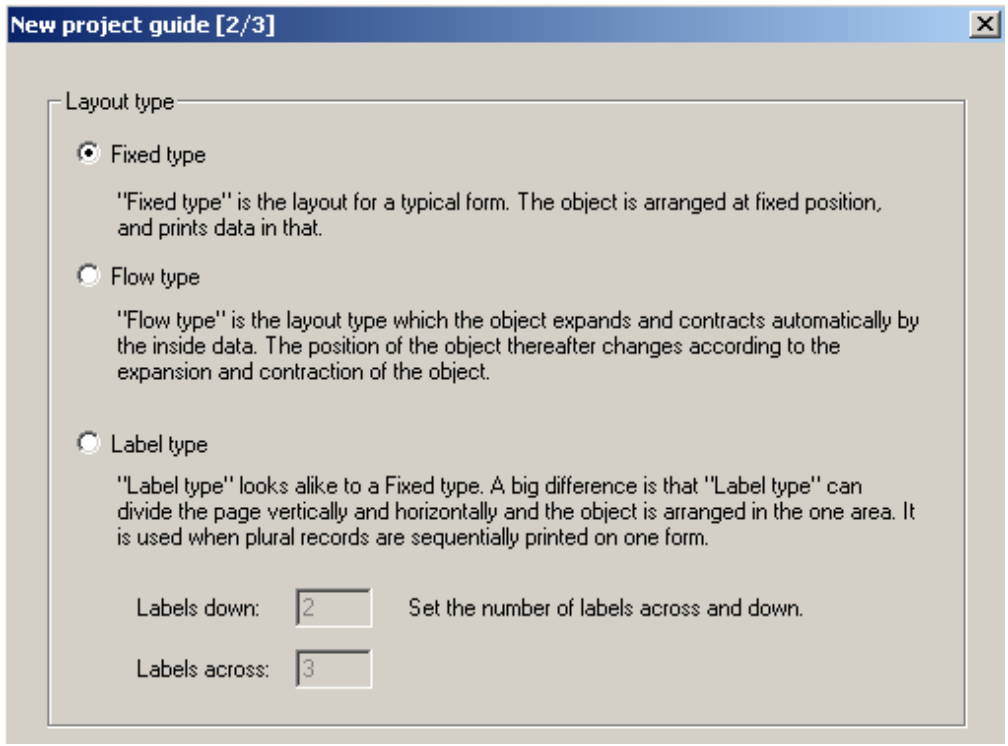


In making a new project, the New Project Guide of XSL Report Designer guides you through the initial steps necessary to set up the project. The New Project Guide has 3 pages.

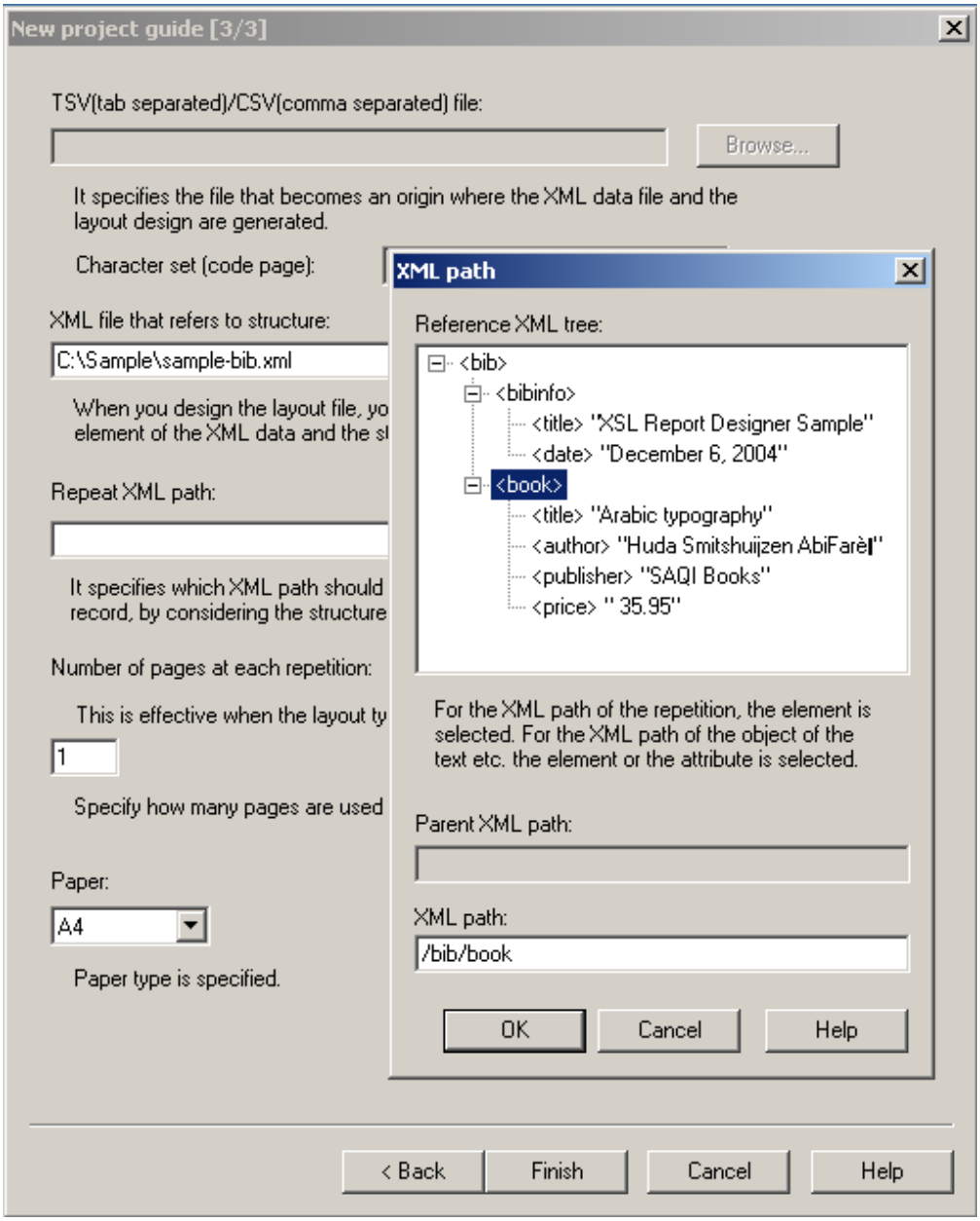
[1/3] First select what type of data the input file will be; "From XML data file" or "Create XML data file and layout from TSV/CSV data file." This is the data file structure that XSL Report Designer will expect for the project. The sample file we are using is an XML data file. Please check "From XML data file."



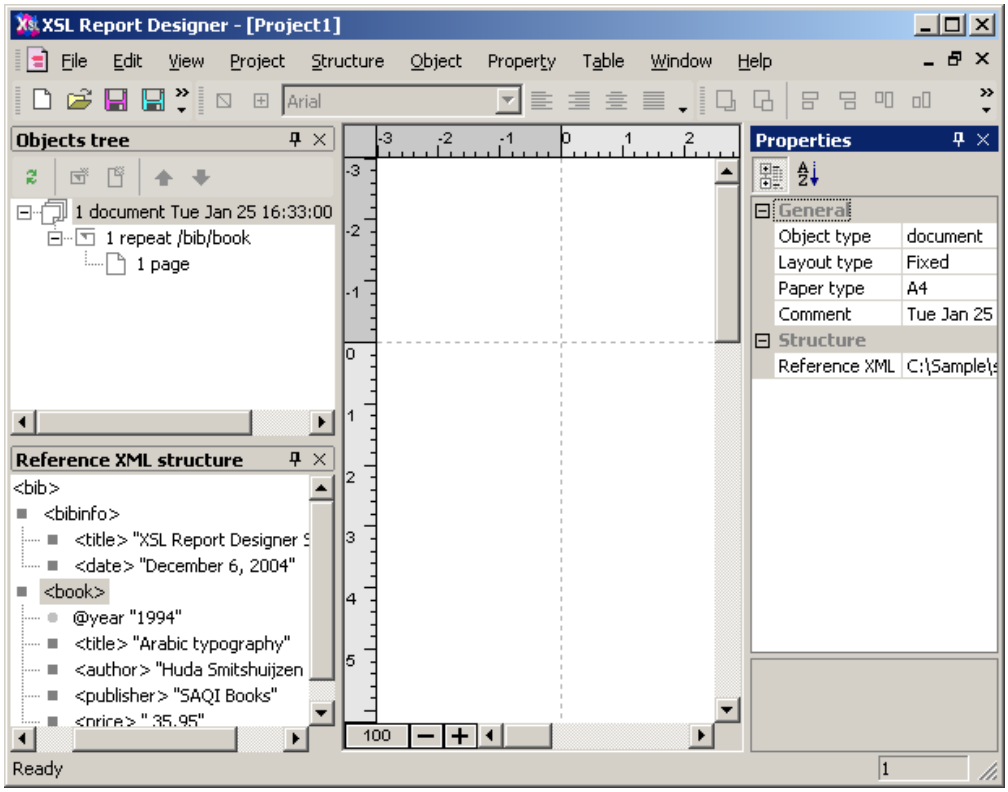
[2/3] Next, the wizard requests that you select the Layout type (Fixed, Flow or Label) for the report. Here, choose "Fixed type."



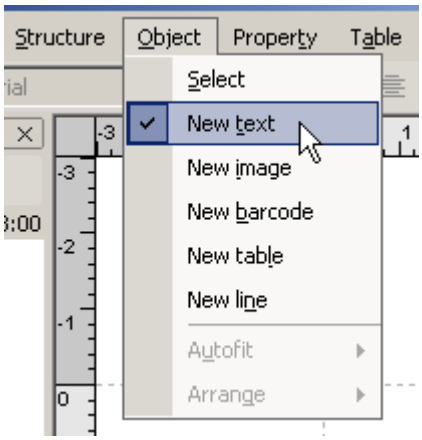
[3/3] Next we need to specify the XML data file that we will be formatting with the Project we create. We will specify "sample-bib.xml" for the "XML file that refers to structure." In addition the wizard requires that you specify the "Repeat XML path" here. The Browse button will show the tree structure of "sample-bib.xml." Choose "book" element for "Repeat XML path."



Close the dialogue by selecting the OK button. Complete the wizard by selecting the Finish button. This will use the default setting for the other items on the page. The screen to design the layout starts.

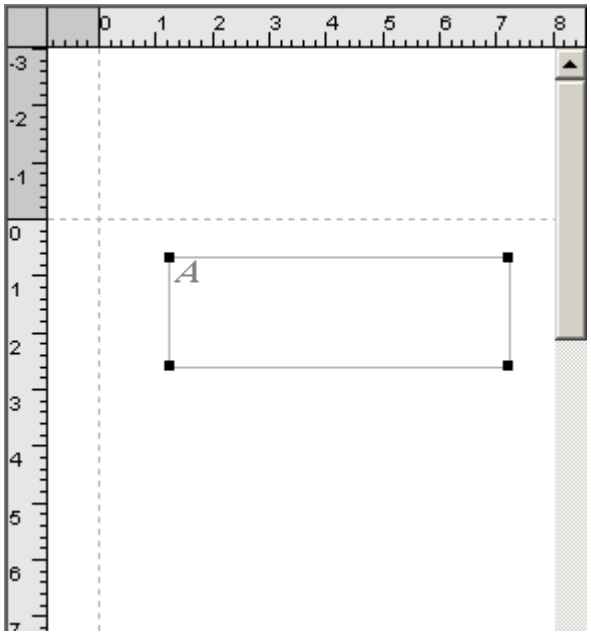


Let's first output the "title" of the books to the report. Because the content of "title" element is text, we need to insert a text object. Open the Object menu of XSL Report Designer, and choose New text. Notice that in the icon bar below the menu bar the icon for new text is now highlighted.

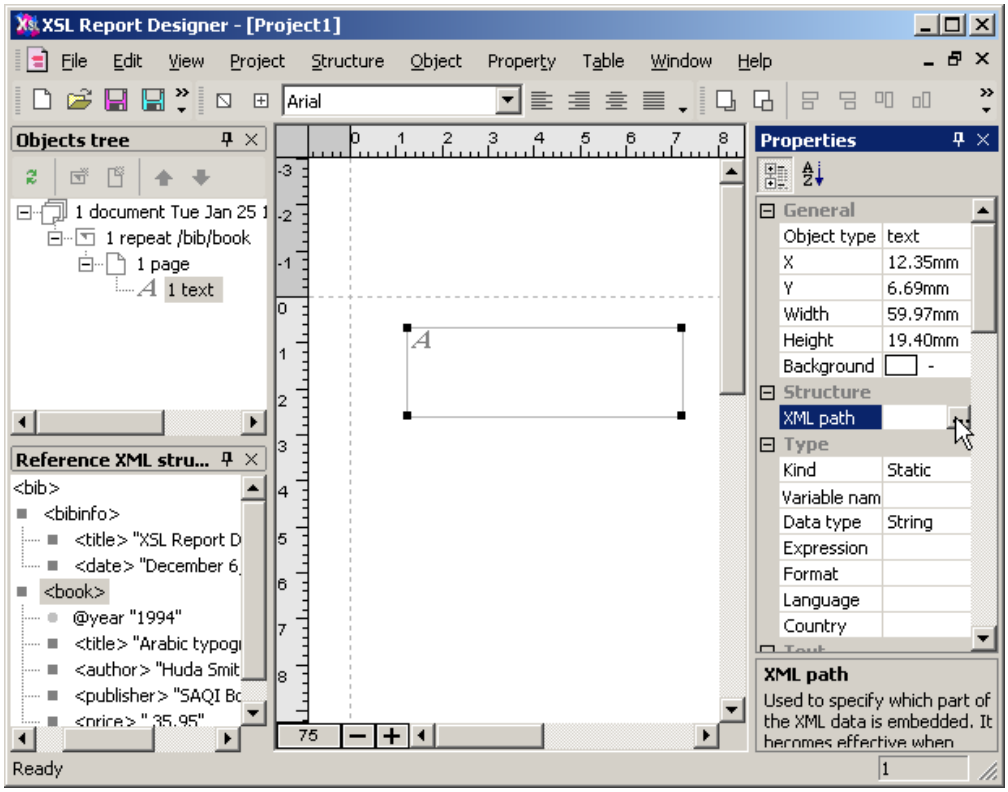


Next, put the mouse on the canvas at the center of the screen, click and hold the left mouse button at the base point of the area rectangle to be drawn for the text object (top left corner).
Move the mouse to lower right while still holding the left button down.
Release the left button when you have the rectangle for the text the size you want.

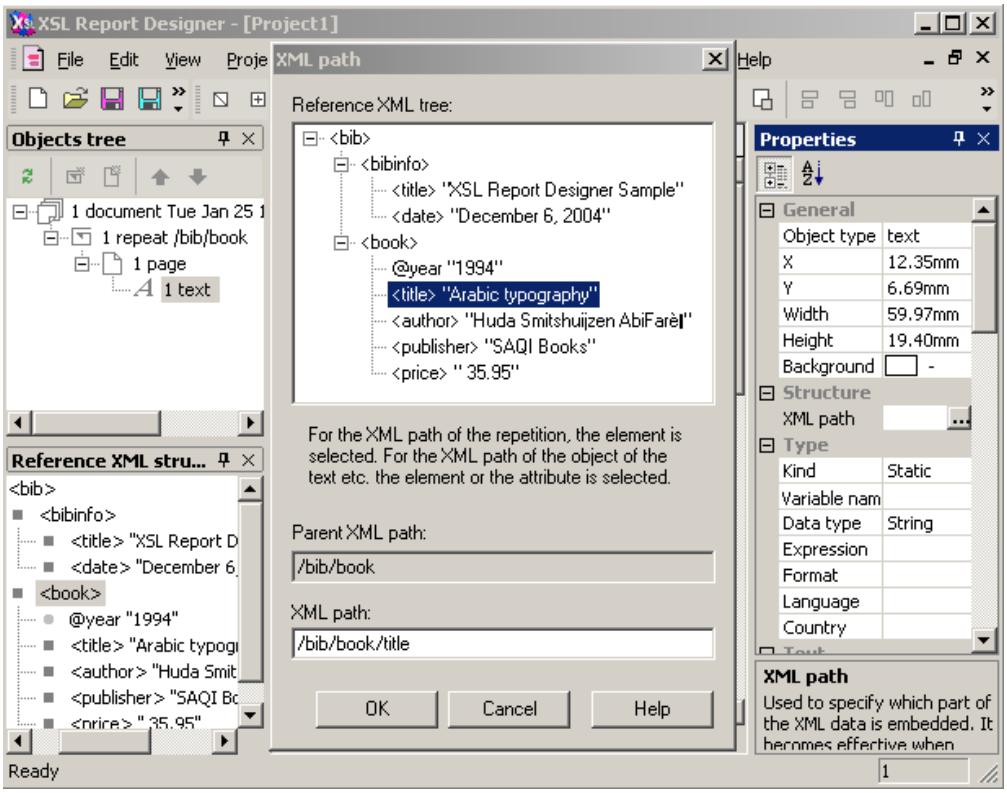
The rectangle should look like the one on the canvas below.
The canvas represents the entire page or piece of paper. The dotted lines delimits the body of the page. The areas outside the dotted lines are the page margins .
The text object we created above should be in the body area of the canvas.



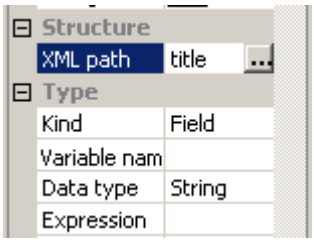
At this point the text box is empty. Next, we will set the content that outputs in the text box. First click in the text box to make sure that it is selected. Moving to the Properties window on the right side of the canvas click on the right edge of the empty cell to the right of the "XML path" property with the mouse. The following is shown.



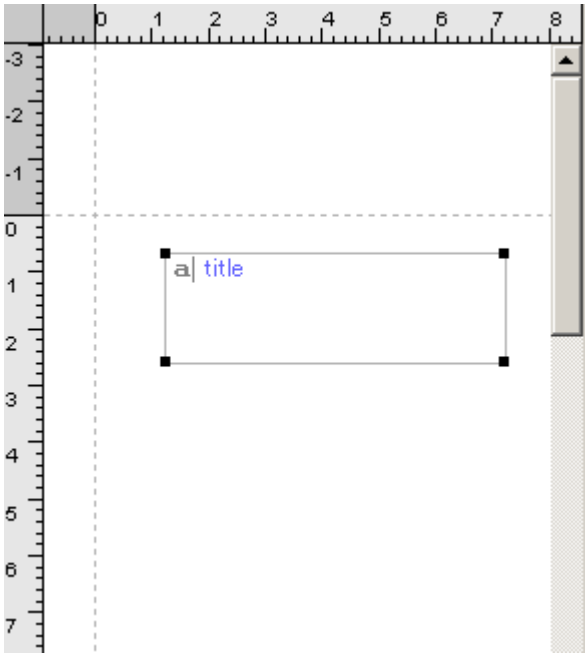
When the same place is clicked again, the tree structure of the XML data file is displayed.



To output the content of the "title" element in the text object we just created choose "title" on the tree of the XML data. Then push the OK button. The dialogue will then close and the "title" will be placed in the XML path cell as the property. Be sure that the value of the cell of the "Kind" under that has changed to "Field" at the same time.

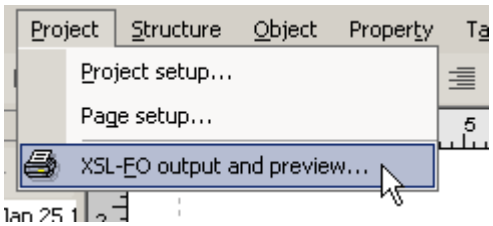


Moreover, the information of "a:title" is now displayed in the rectangle of the text object on the canvas. If the Show sample from XML path command in the View menu is checked, the character string "Arabic typography" that is the content of the pertinent element of the reference XML data is displayed in the rectangle of text object instead of "a:title."

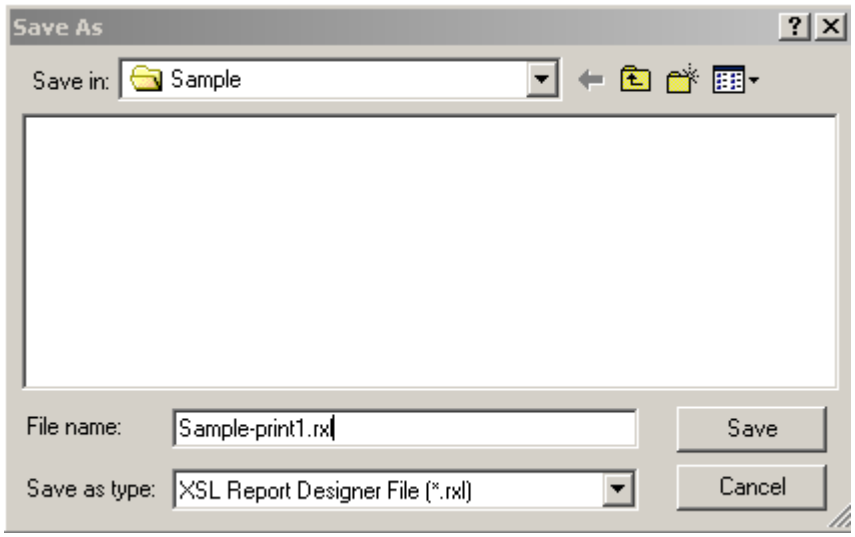


The next step is to convert the content of the XML data into XSL-FO, preview in the GUI of XSL Formatter or AH Formatter and finally generate PDF. XSL Formatter V4.0 or later, or AH Formatter V5.0 or later must be installed on your system for both the preview and to generate PDF.

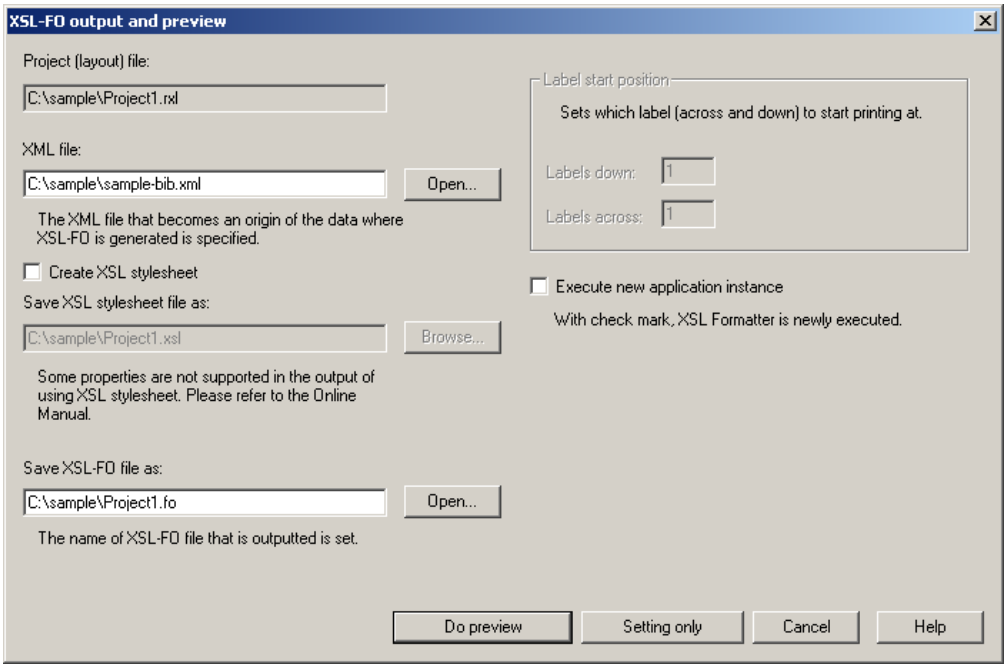
Choose the XSL-FO output and preview command from the Project menu of XSL Report Designer.



Because the project file has not yet been saved, a dialogue box to save the project file will be displayed. Save the project by applying a file name. The extension is ".rxl."



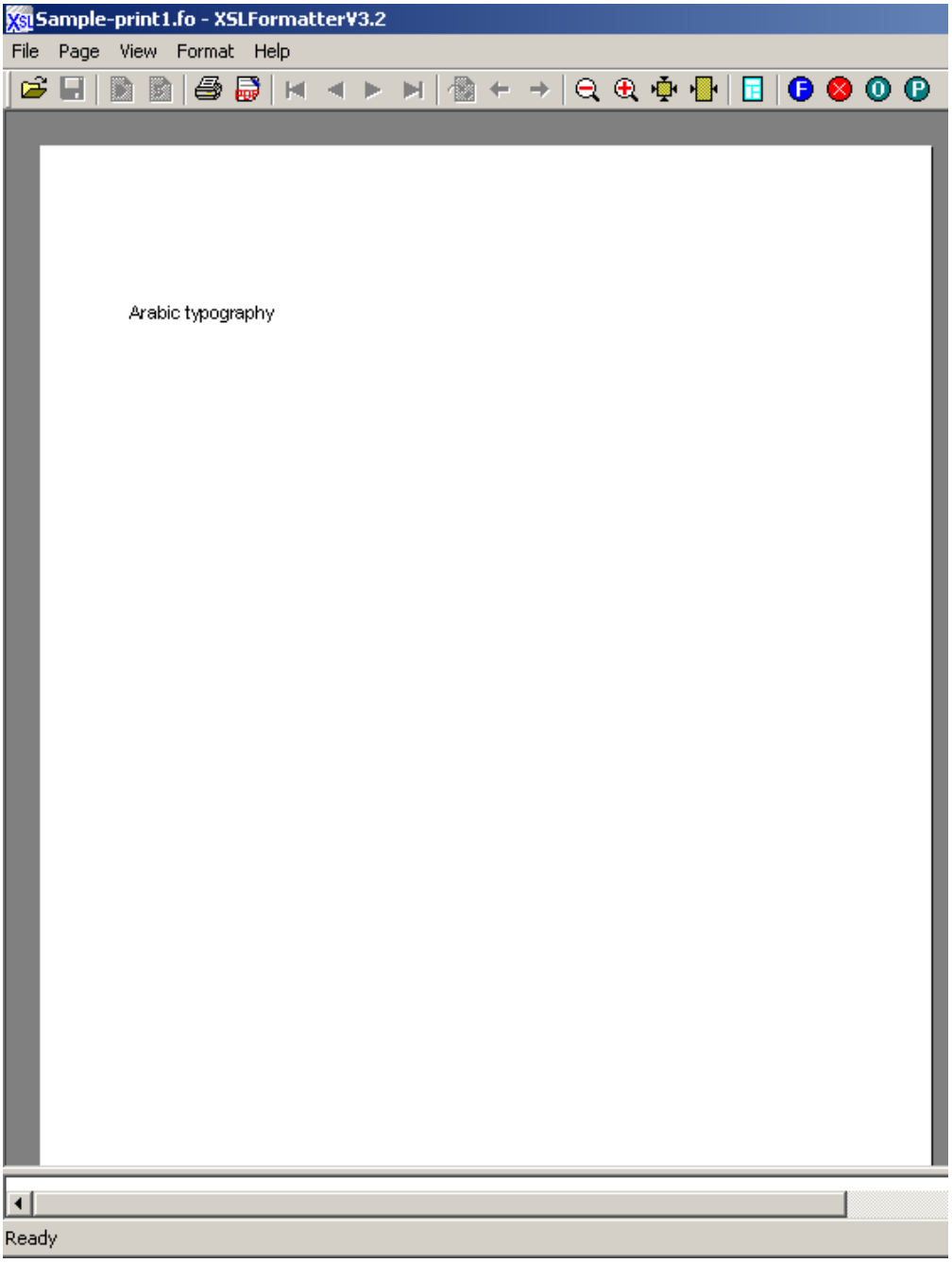
Next, the "XSL-FO output and preview" box will open. Set the path to the input XML file (for the tutorial this is the "sample-bib.xml" file) and to the output XSL-FO file. To preview the output push the "Do preview" button.



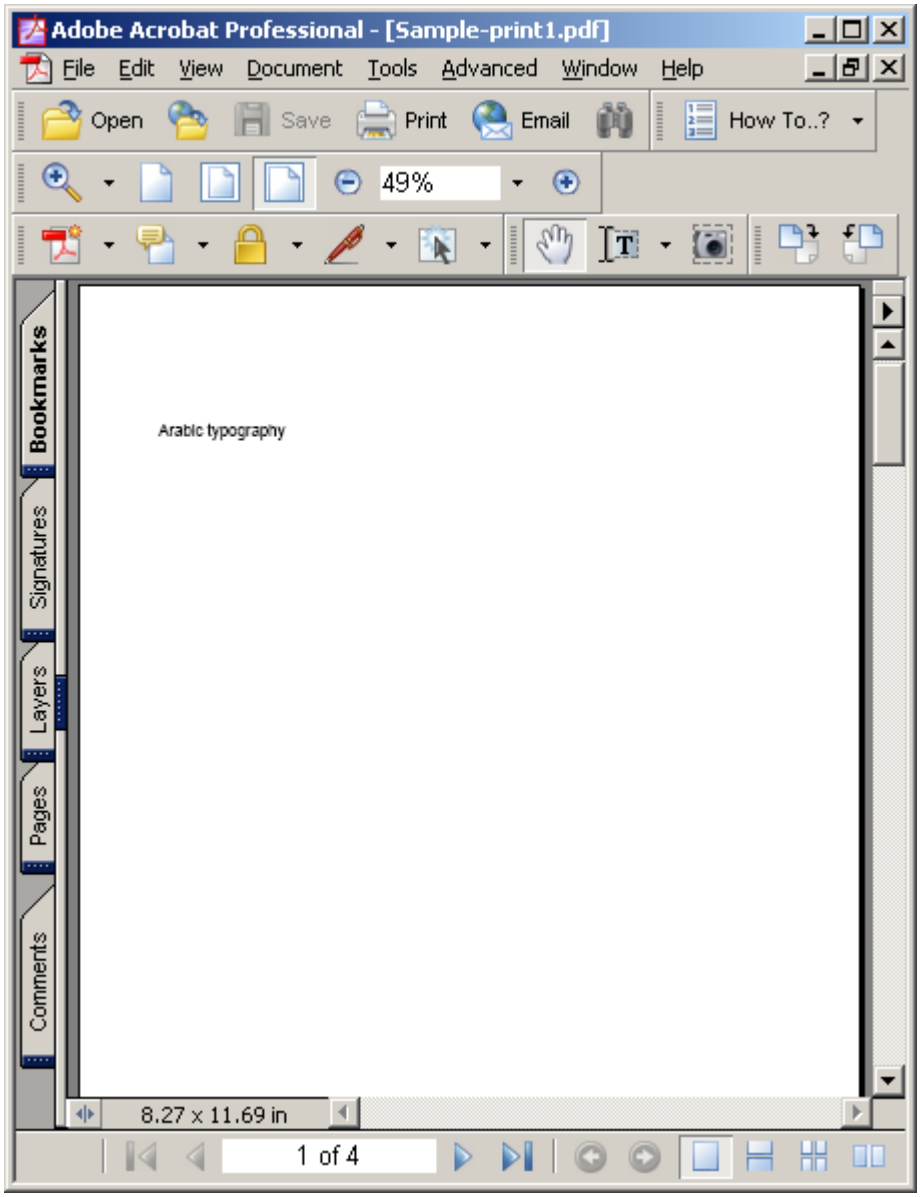
The following dialogue appears.

First, XSL Report Designer starts the Runtime Engine and using the project file converts the input XML file to XSL-FO. The Runtime Engine might take time to execute because it has to start VM of JAVA etc. Next, XSL Formatter or AH Formatter is started, and XSL-FO is formatted. Again, it might take a little time to execute the preview the first time due to the process of starting of XSL Formatter or AH Formatter. Subsequent previews are much quicker. In a normal production environment these processes would be executed very quickly on a server.

At this point "Arabic typography," the title of the first book is displayed on the preview screen of XSL Formatter or AH Formatter. With the current project file the "title" element of each "book" will be displayed on a new page. The sample-bib.xml file contains 4 books entries, thus 4 pages were created.
By pushing the PDF button on XSL Formatter's icon bar or AH Formatter's icon bar a PDF file will then be created.



The following is the PDF that XSL Formatter or AH Formatter generated.



How was it? I'm sure you found this to be a lot easier than trying to program an XSL stylesheet.

10.3 Making of table

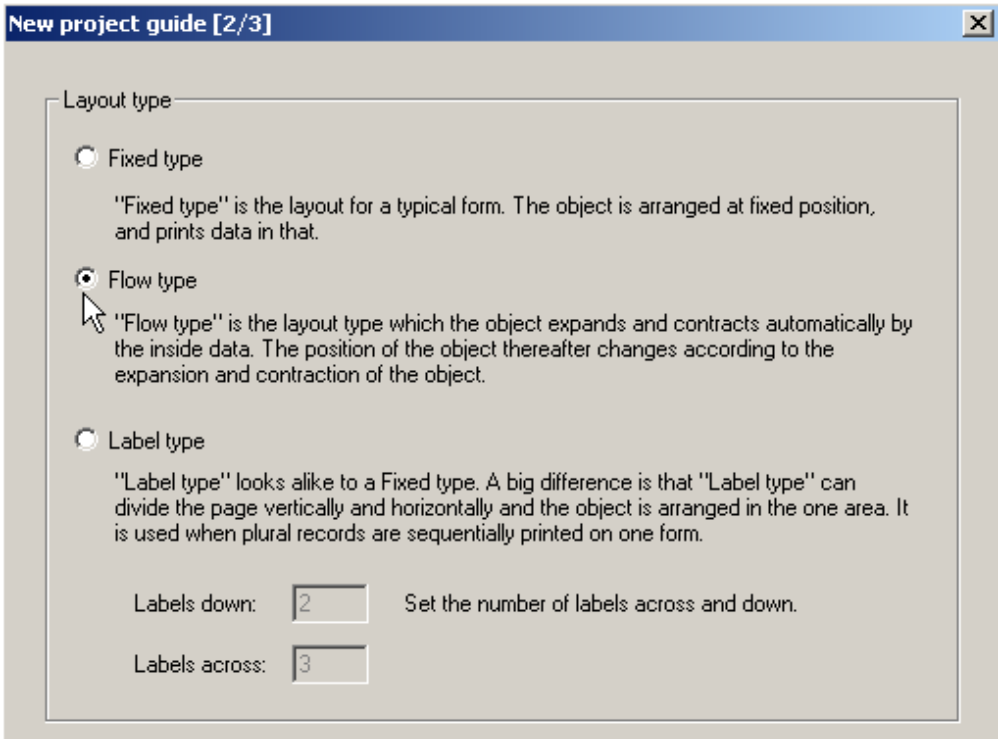
Next, using the same XML data of the book list let's make table in the report.

Format of this table is as follows:
(1) One line for the header.
(2) The information for each book will be output to one line in the table body.
(3) There will be 4 columns of information for each book (title, author, publisher, and price).

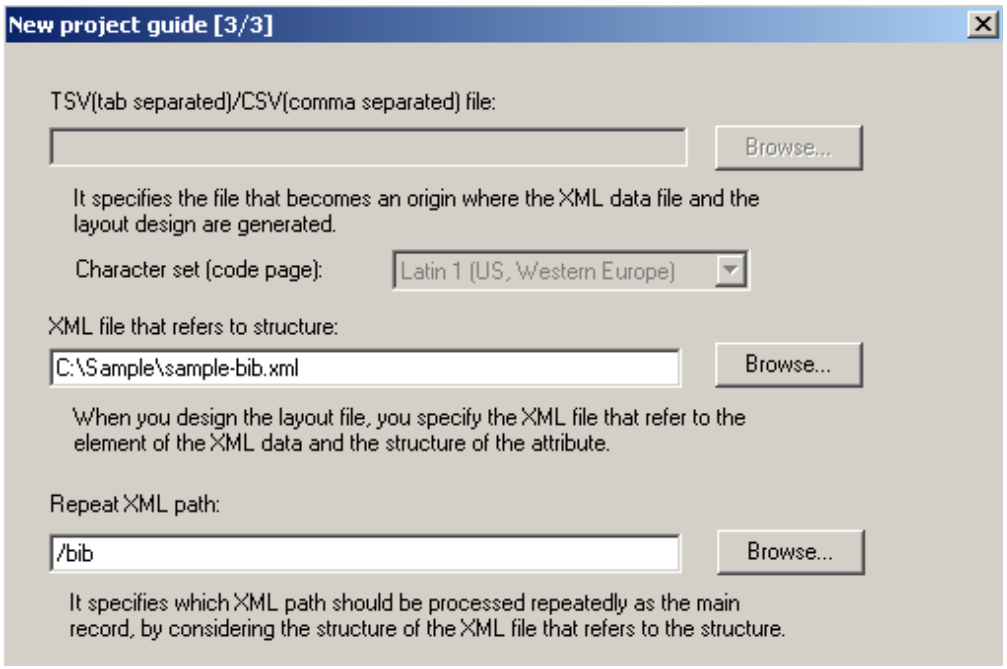
First, choose New project in the File menu of XSL Report Designer.

Choose "From XML data file" and click on the Next button.

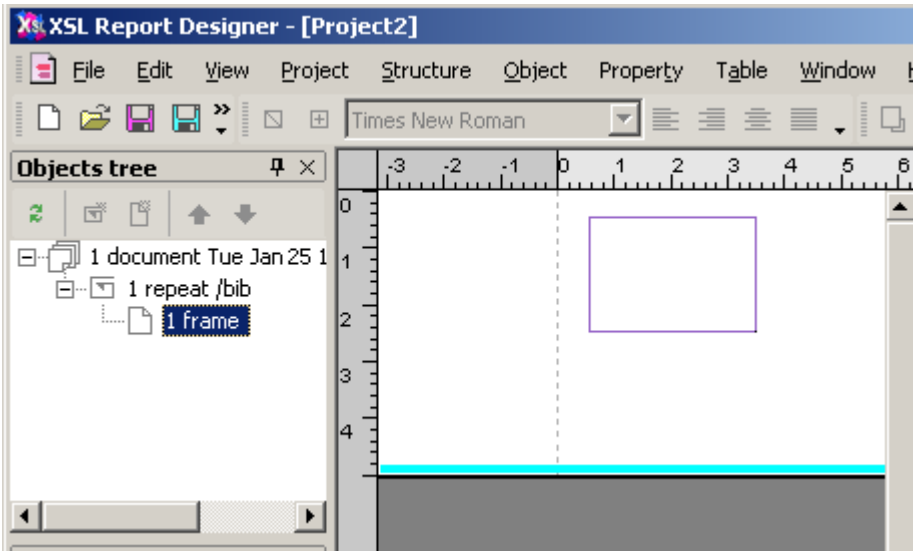
Select "Flow type" for the layout. Click Next.



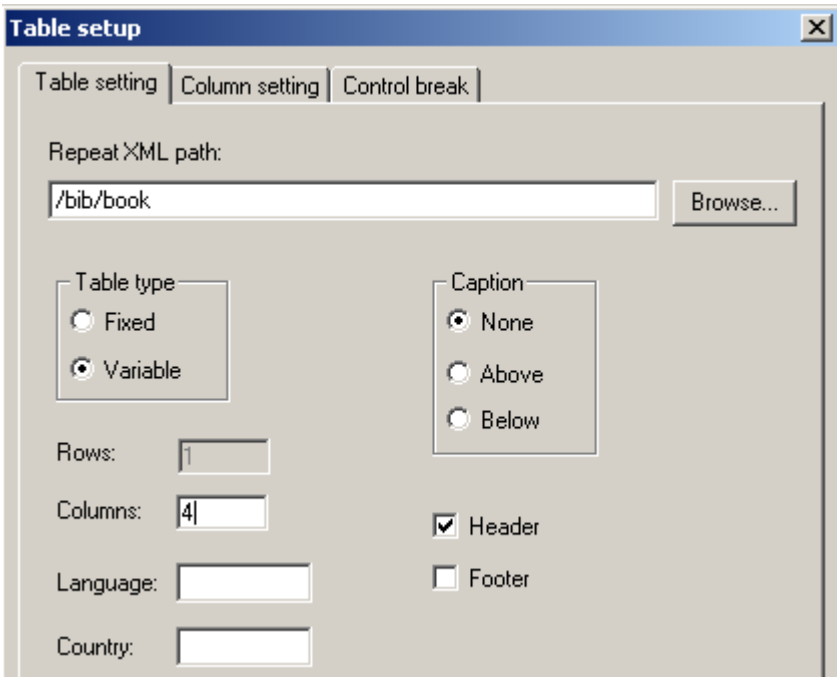
Specify "sample-bib.xml" for "XML file that refers to structure" in the New project guide, the same as we did for first example.
Specify root element "bib" for "Repeat XML path." This will make the entire XML data output to one table of the report.
Click Finish.



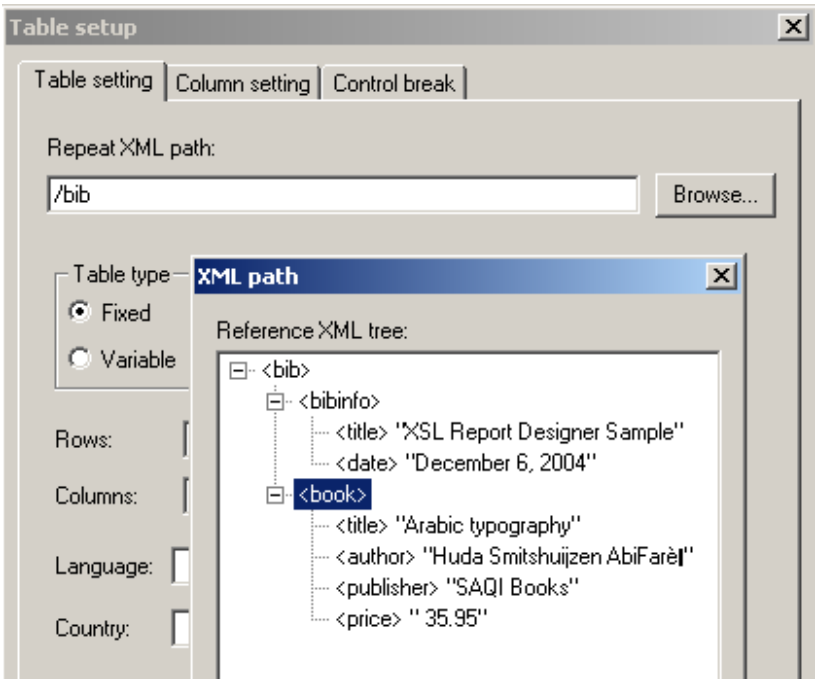
To create a new table, choose New tablefrom Object menu.
Next, select the "frame" by clicking on it in the Objects tree window as shown in the following. When "frame" has been selected, a light blue line is displayed under the canvas.



To make a new table in the canvas, choose New table from the Object menu. Now draw a rectangle on the canvas the same as we did for the text object.
Once the rectangle is drawn the following "Table setup" dialogue will be displayed.



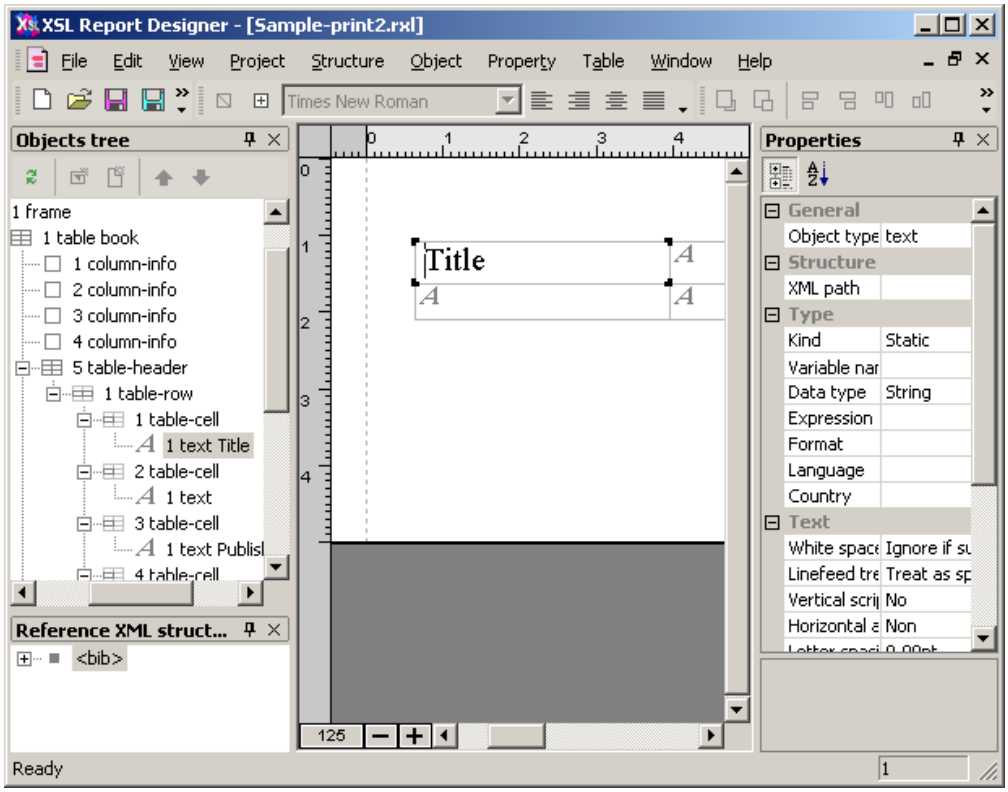
Set "Repeat XML path" of the table in the "Table setup" dialogue by specifying the "book" element. This element corresponds to one row of the table.



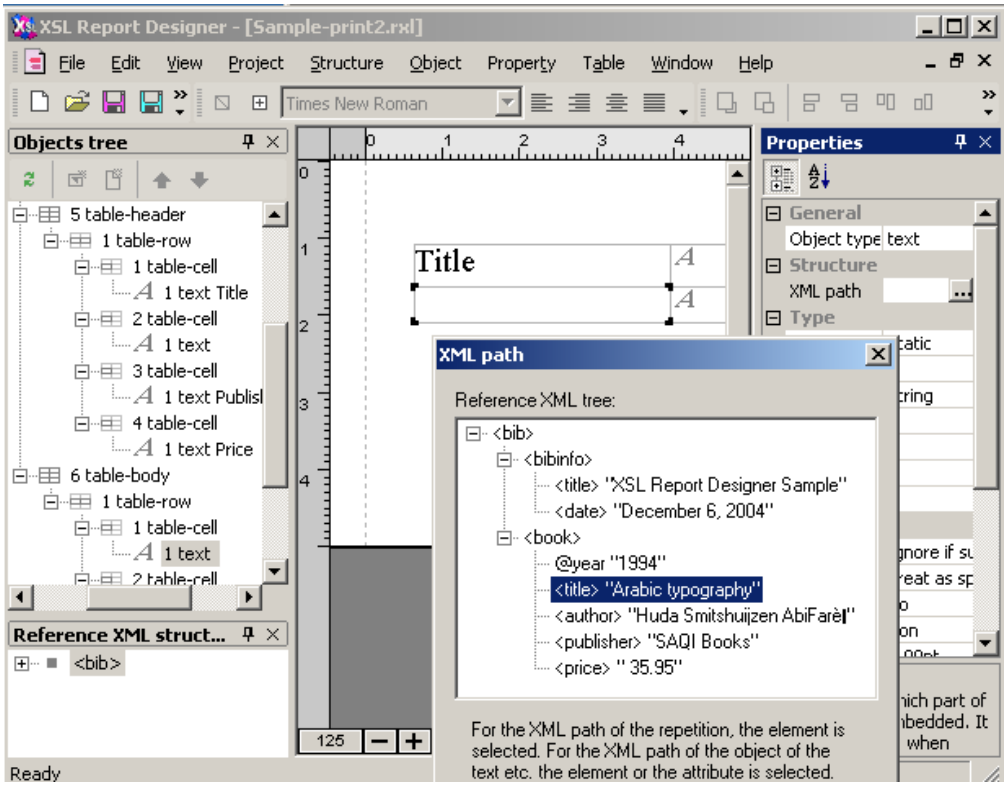
Choose "Variable" for the "Table type" in the same dialogue. Variable means the number of rows of the table expands according to the amount of data.
Specify 4 for the number of columns.
Because we want to apply a header row to this table, be sure "Header" is checked.
Click on the OK button.

At this point a table object containing two lines and four columns is automatically placed on the canvas.
Now we will set the output contents of each of the empty cells.

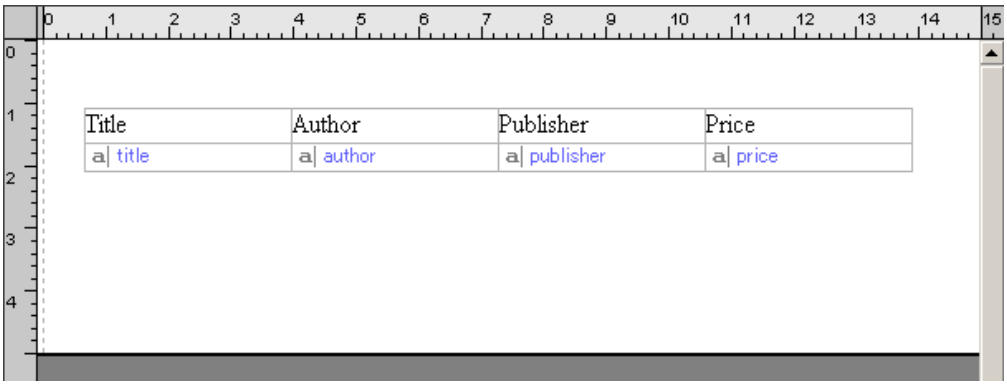
The first line is the header line. We will input the static character using XSL Report Designer by double-clicking in each of the cells with the left mouse button and then typeing. From the left cell type "Title," "Author," "Publisher" and "Price."



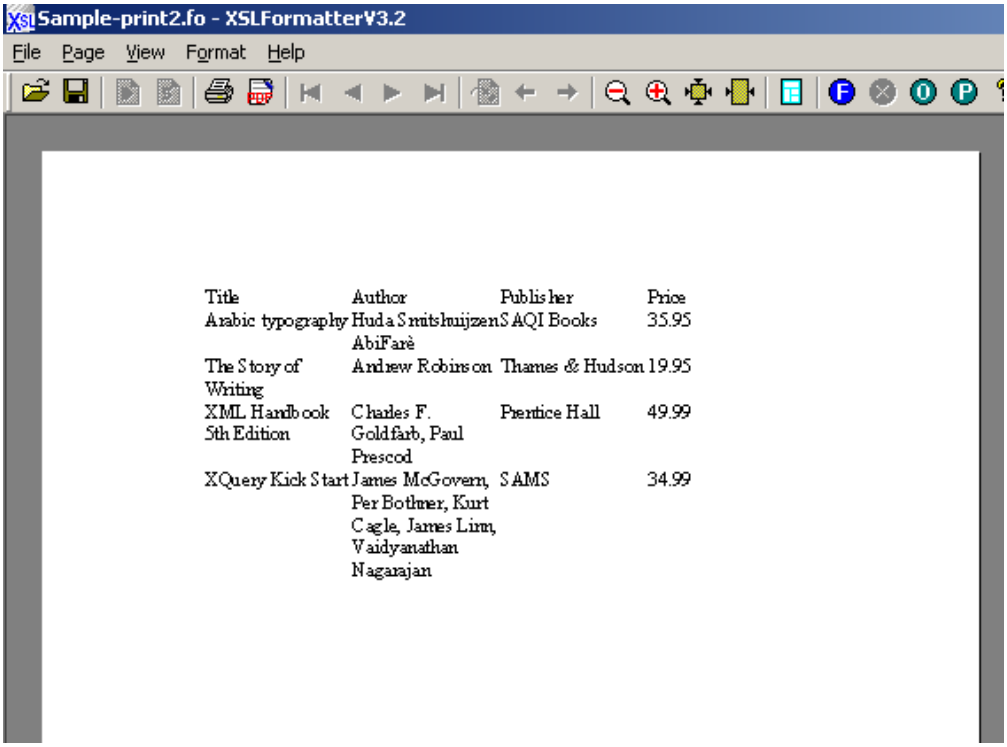
The second line is where we will set the output for the content of the XML data.
Starting at the first cell select the cell by clicking on it.
Then double-click the right edge of the blank cell's "XML path" property in the Properties window in order to display the dialogue box to specify the "XML path" for the cell.
Choose the element to output to the data cell. Set "title," "author," "publisher" and "price" element sequentially.



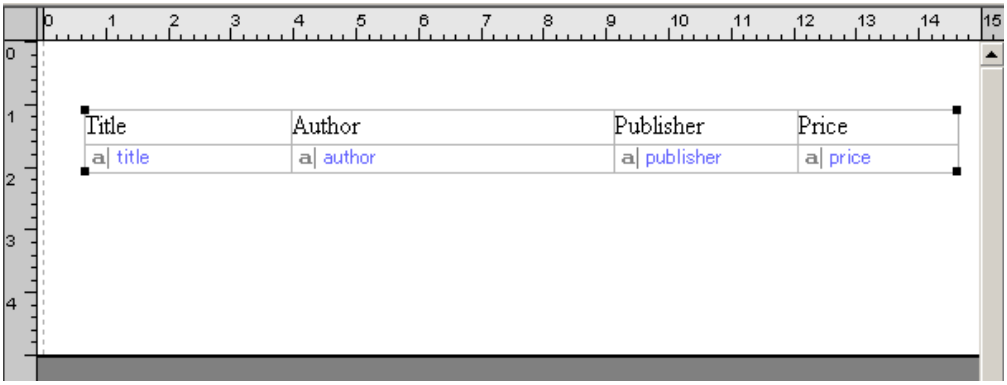
After all the XML paths have been set the following is displayed on the canvas. When the Show sample from XML path command in the View menu is checked, the sample text is displayed in each cell.



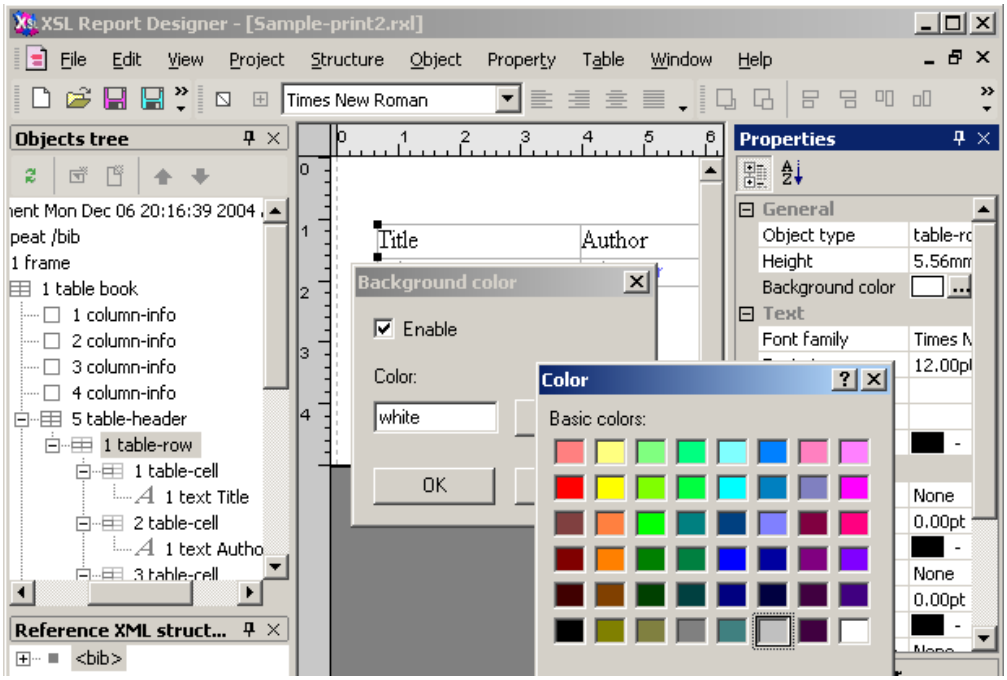
When the XSL-FO output and preview command in the Project menu is executed at this stage, the completed table will appear in the preview window of XSL Formatter or AH Formatter as follows.



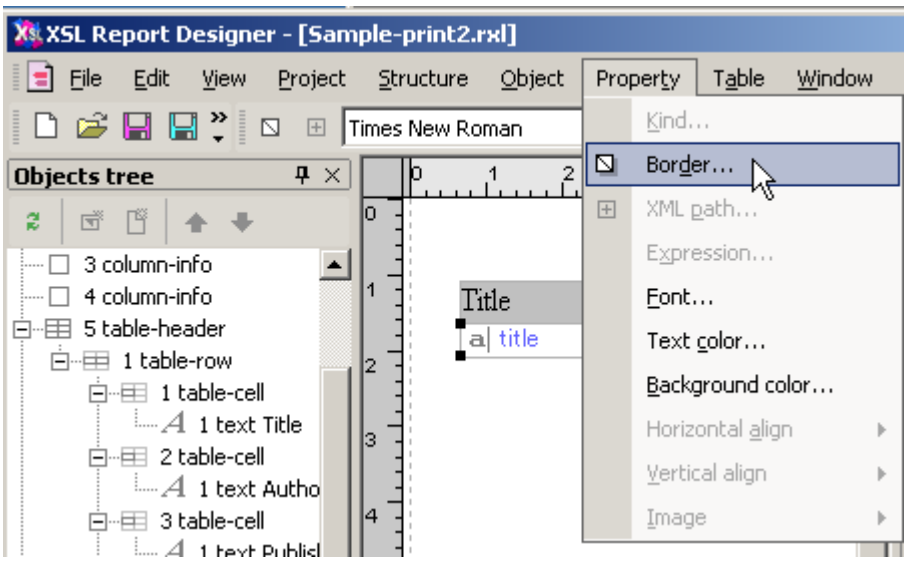
Let's adjust some of the layout here. First we will increase the width of the author column. To adjust the width of a column, set the cursor on the left or right border of the column and when the shape of the cursor changes to the width tool, click-and-hold the left mouse button and drag the border in the direction you want to adjust the width to. Once you release the left mouse button the column with will be set. Now adjust the widths of each of the columns so that they look like the following image.



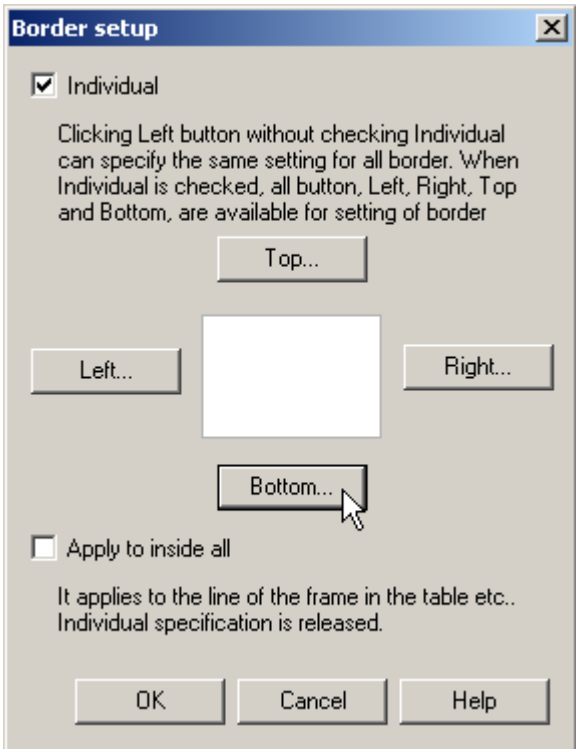
Next, we will apply a background to the header. First of all, in the Objects tree window click the table-row under table-header. This will choose the entire line. In the Properties window Double-click on the right edge of the Background color. This will display the Background color dialogue. Check "Enable." Click the Select button to display the "Color" table. Select the desired color. Click "OK" and "OK." That was easy.



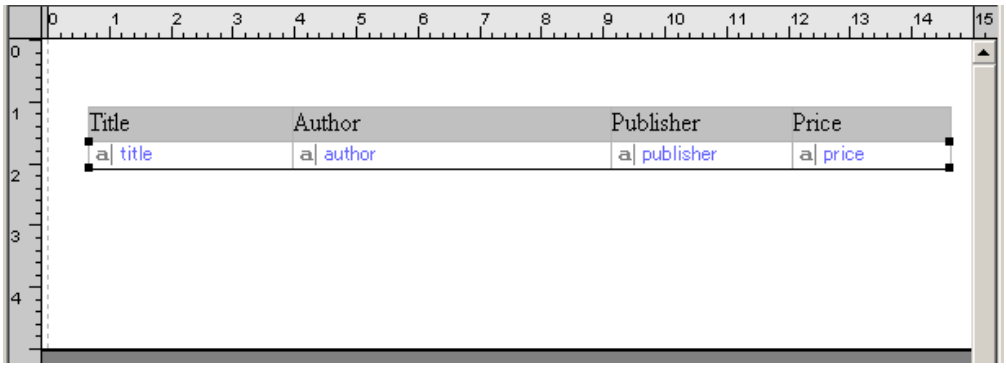
Because this table does not have lines between rows it is difficult to follow each book entry. Next we will draw a line under each row. First of all, in the Objects tree window click table-row under table-body to select the entire row. Next, in the Property menu choose Border.



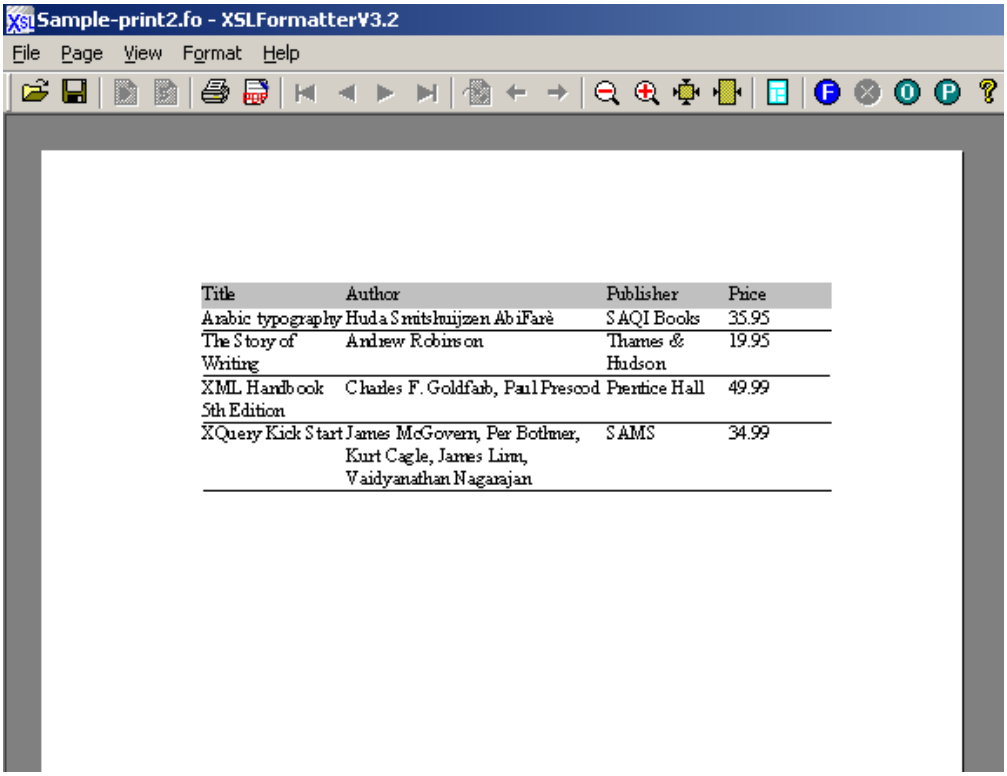
When the "Border setup" dialogue is displayed, check "Individual" and choose Bottom and Solid in the "Style." Click "OK" and "OK."



The table object on the canvas will now look like this.



Now when you do the preview the report will look like this.



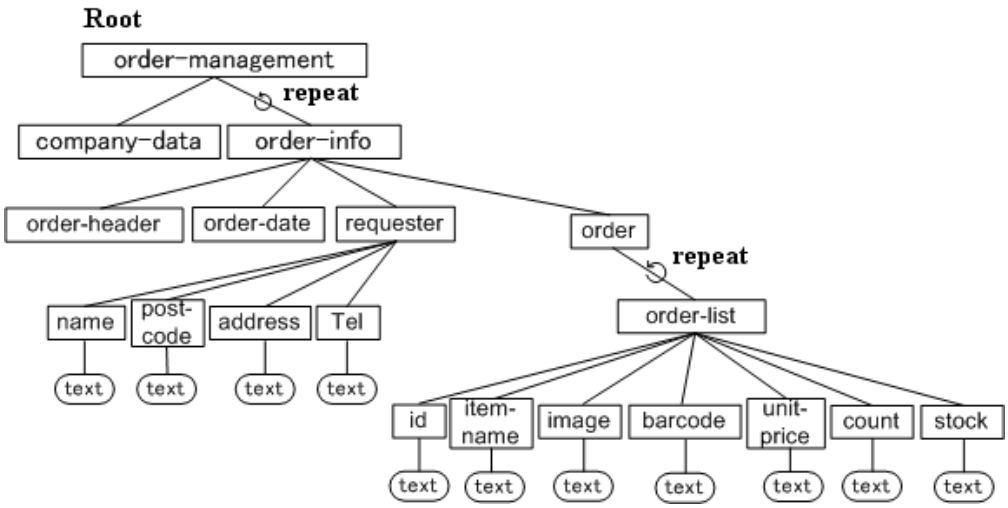
With XSL Report Designer taking XML data and placing it in a table is easy. Adjusting the table layout is also very easy. All the table layout adjustments are available either through the Property and Table Menues or the Properties Window. This includes properties such as cell padding, font selection and vertical and horizontal alignment within a cell. Now try some of these by yourself.

11 Layout design with a sample file

Now that we understand the basics let's design a layout of a more complex report. For this we will use another Sample file included with XSL Report Designer.

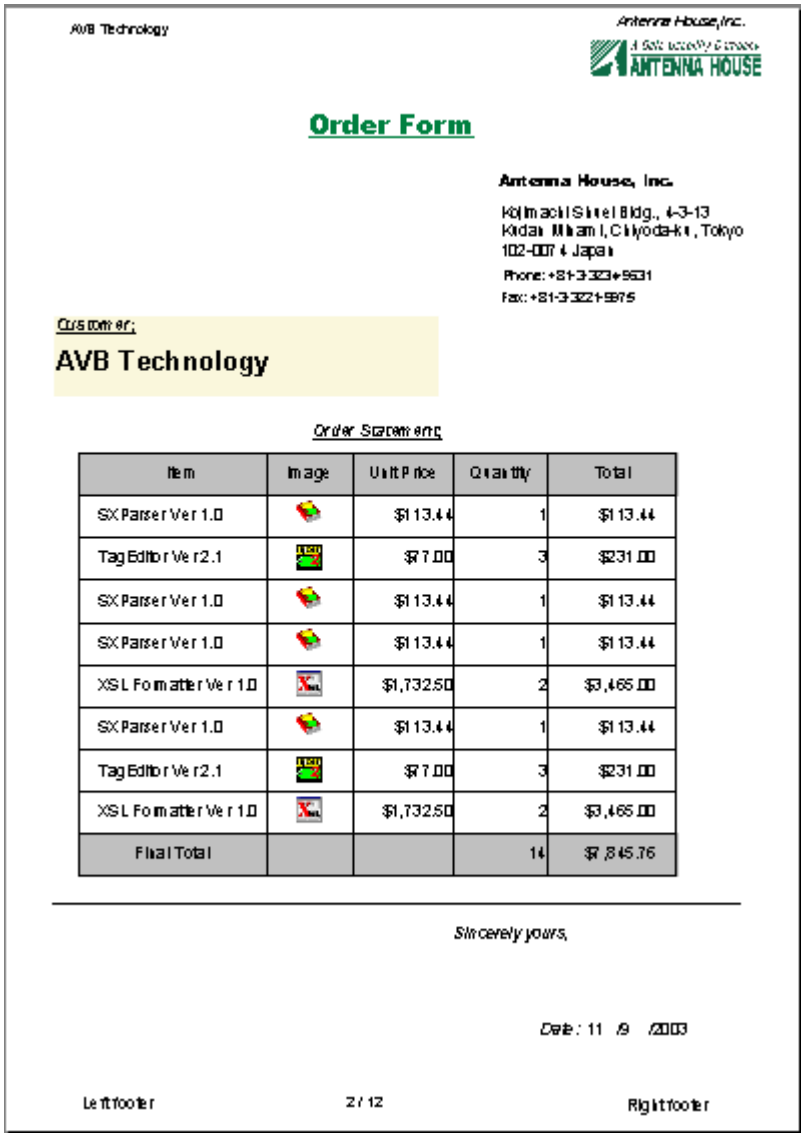
■ Sample XML file : "Sample-data.xml"

The overall tree structure of this sample XML file is as follows: There are two repetitions in the XML tree. The first is the "order-info" which corresponds to one order. This contains the elements "order-date," "requester" and "order." The "requester" contains elements for the customer information. The "order" brings the content of the order together. There is "order-list" under "order" which is the second repetition element. The "order-list" contains information on the products being ordered and the quantities be ordered "count" .



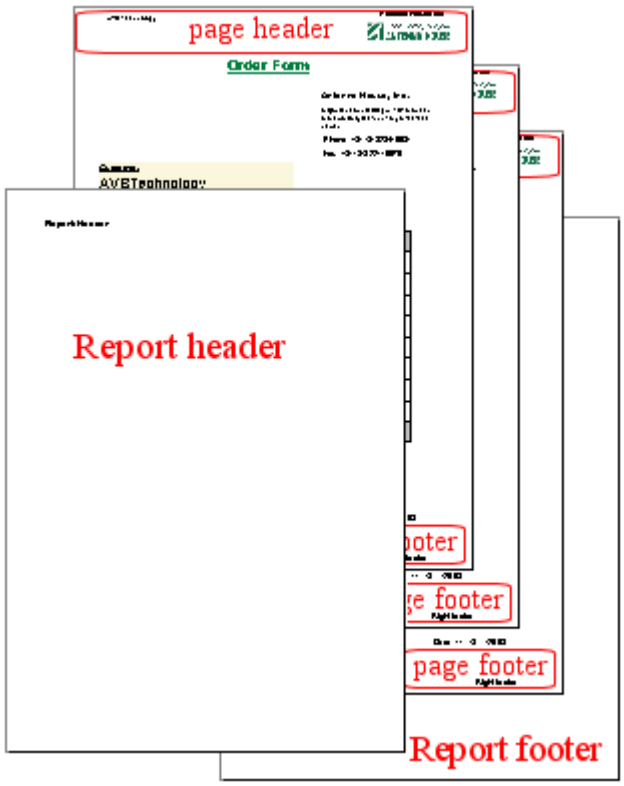
Now, let's make the "Order Form" from the XML file.

- The sample file order-fix.fo is the finished "Order Form" and can be displayed with XSL Formatter or AH Formatter.



11.1 Designing the report

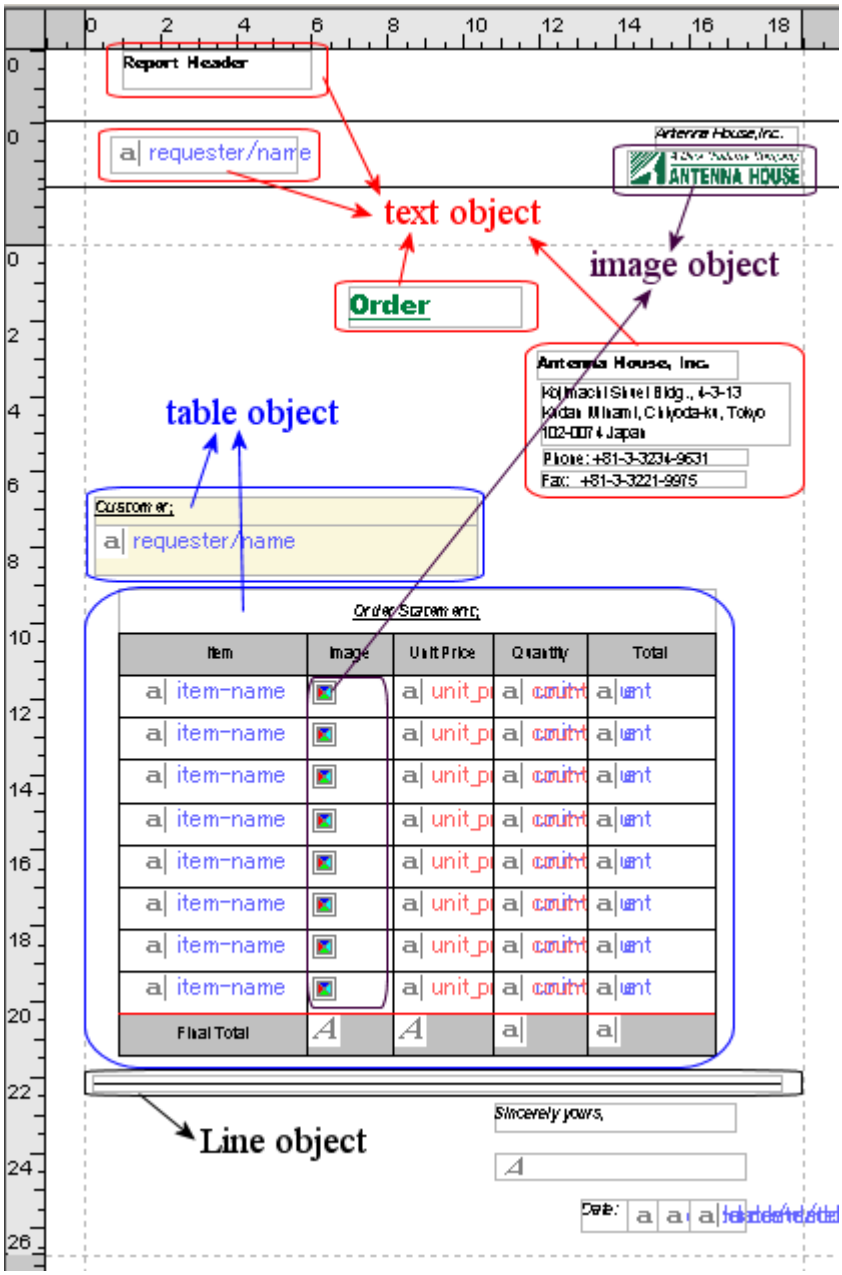
The "Order Form" consists of a report header, the sales order text as the body, and the report footer. The page header and page footer appears on each page of the form.



For this project XSL Report Designer will be used to combine, arrange and layout four kinds of objects in the project file. They are:

- Text
- Image
- Table
- Line

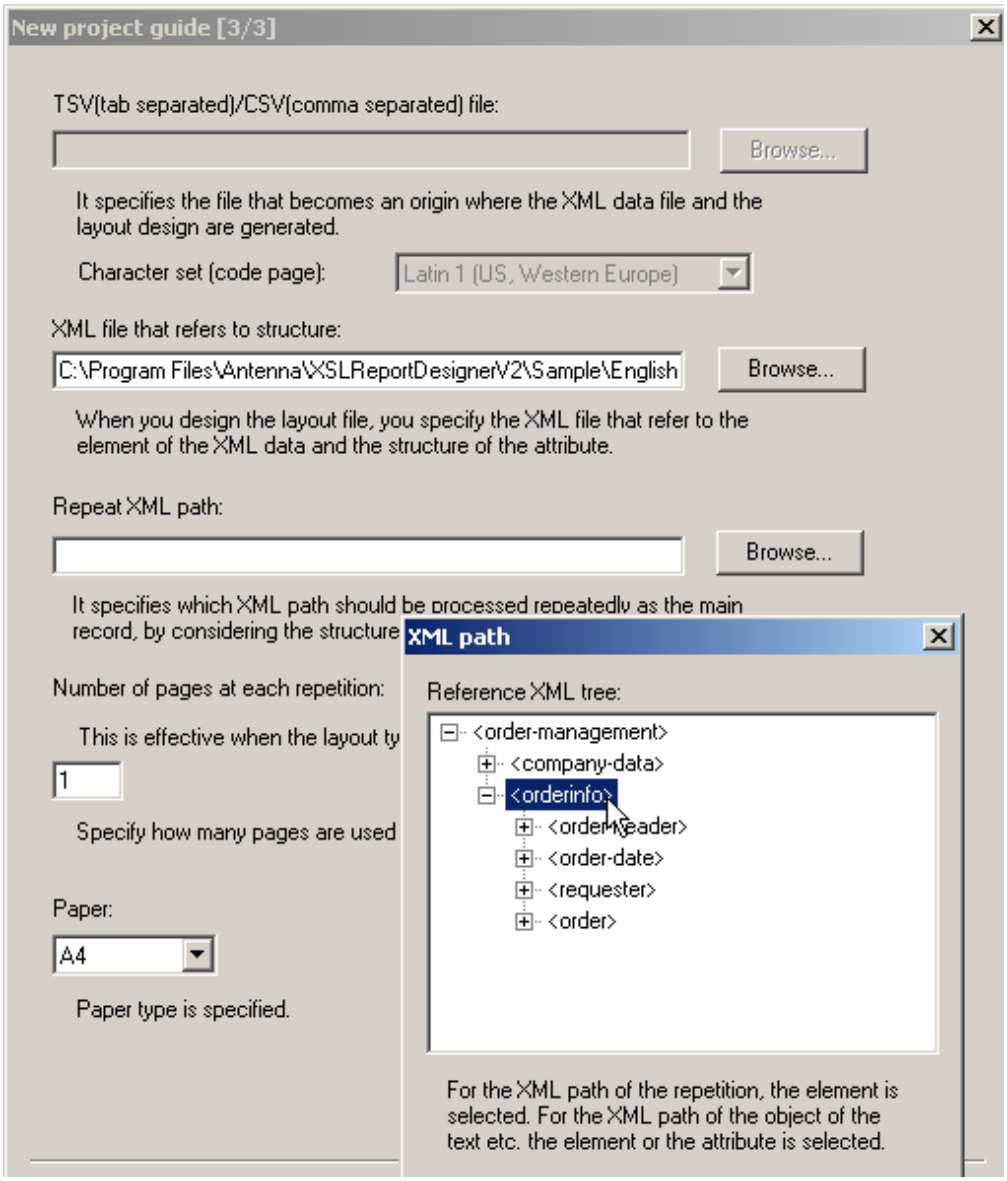
Those objects are shown on the layout pane of XSL Report Designer as follows.



New project window

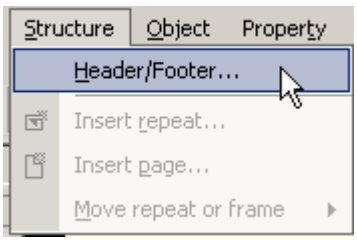
To make the new project follow these steps: (Note: Screens that have previously been explained have been omitted here.)

From the File menu select New project.
Choose "From XML data file."
Specify "Fixed type" for layout type because for this report one page will be printed per order.
For the "XML file that refers to structure" we will be using "Sample-data.xml."
For the "Repeat XML path" select the "orderinfo" element in the tree structure display. This will setup "orderinfo" as the first Repeat XML path for the report.
Click the OK and the Finish.

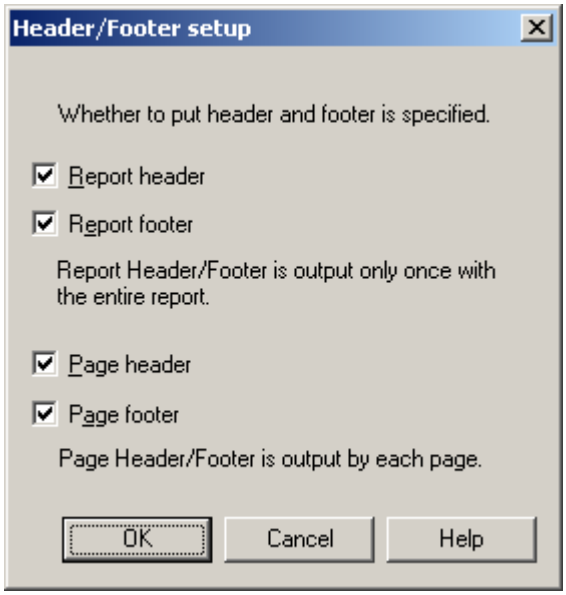


Setting the header and footer

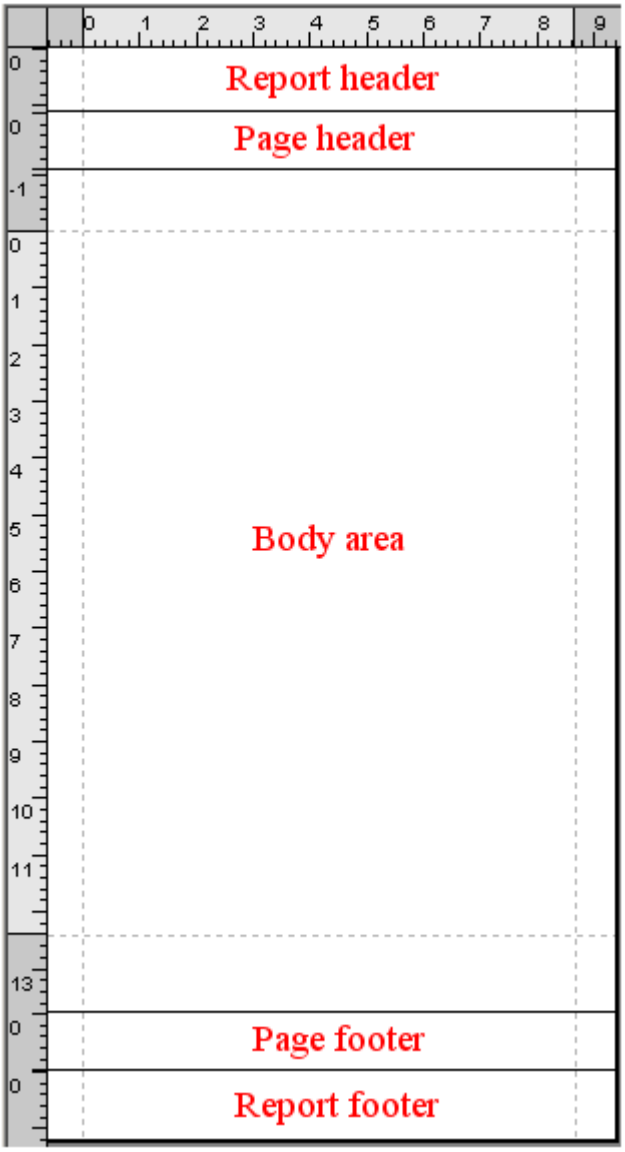
We are now ready to layout the report. Choose "Header/Footer" from the Structure menu.



In the "Header/Footer setup" dialogue check all items; Report header, Report footer, Page header and Page footer.



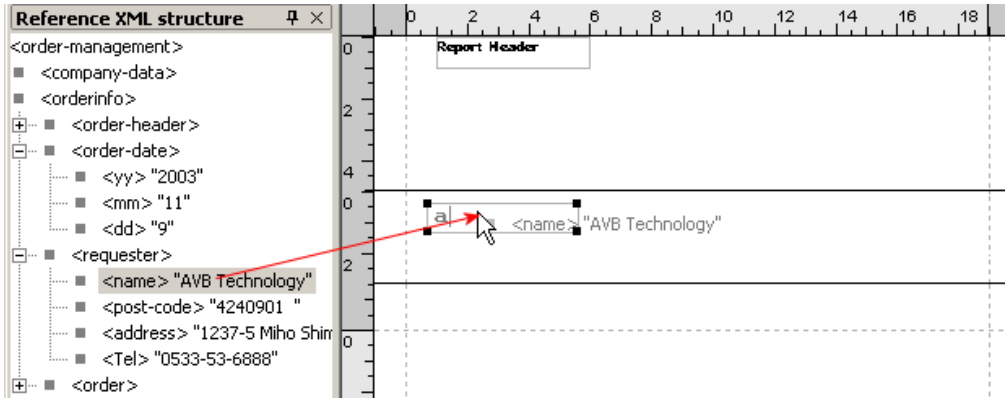
When the OK button is pushed the canvas will now contain layout areas for the Report header, Page header, body, Page footer and Report footer.



Set the XML path for the Page Header text object

The design of this report calls for each page to have a header with the customer name aligned left. The tree structure of "Sample-data.xml" is displayed on the left side of the screen in the Reference XML structure window. Once a text object is placed on the canvas a shortcut to defining the path is to click on the object in the Reference XML structure window and then drag it onto the text object on the canvas.

Now place a text object in the Page Header area and then drag the "name" element (customer name) from the Reference XML structure window and drop it on the text object.

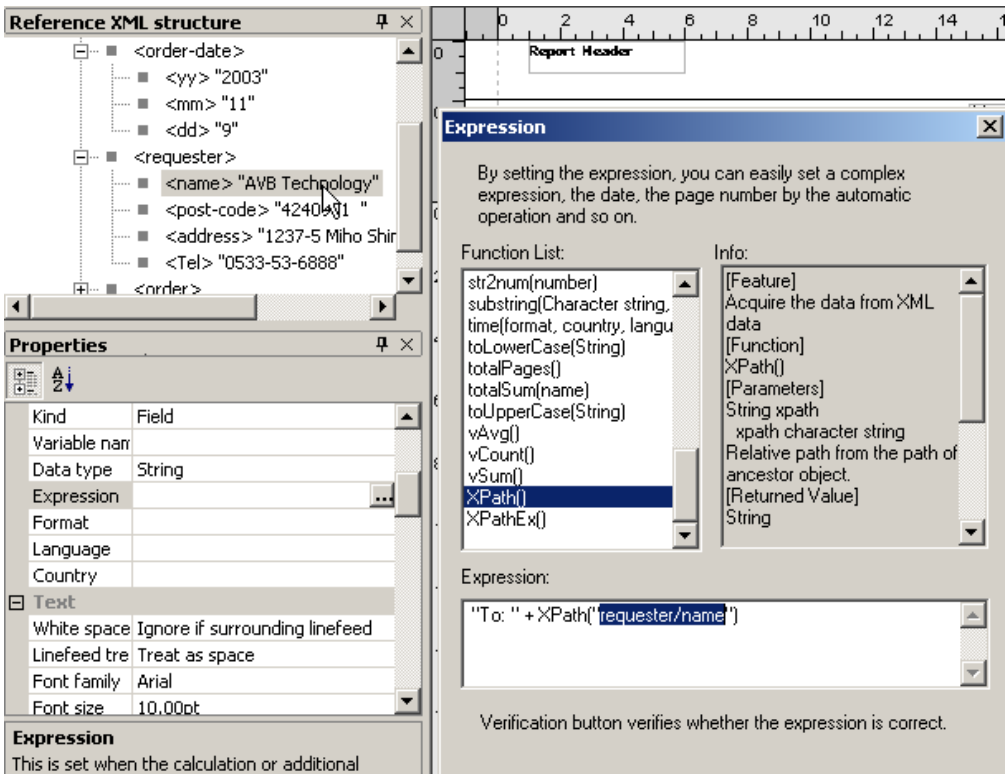


Also, if you place and the select the text object you can choose the element for the customer name from the window that shows the tree structure of "Sample-data.xml" when the "XML path" property is clicked in the Properties window.

Inserting an expression (XPath) for a text object

For this text object in the header we want to have "To" displayed before the customer name. This can be set using the XPath expression. When "Expression" property is clicked in the Properties window the "Expression" dialogue is displayed.

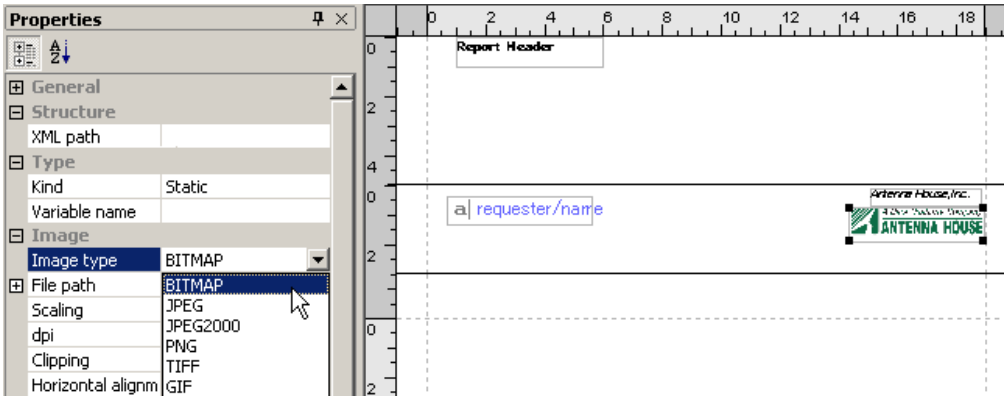
Choose "XPath()" from the function list and double-click the left mouse button. This will put "XPath()" in the edit box of the expression. Now complete the expression by typing "To:" +XPath("requestor/name").



Inserting an image object

Next we will arrange the company name and logo on the right edge of the page header. Use image object to insert the logo. Set "Image type" to "BITMAP" in the Properties window. Set the "File path" to where the picture file is for the logo.

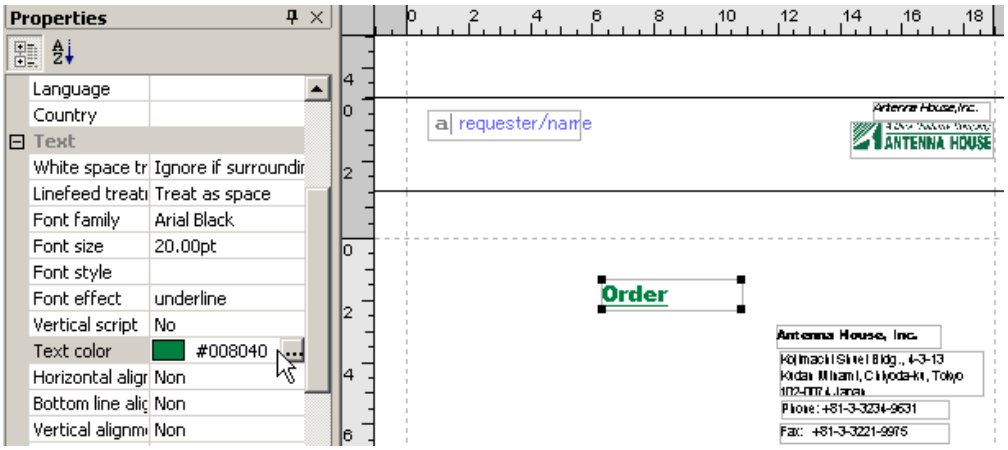
Place a text object above the image and then type the Company name in that.



The Page header is now finished.

Laying out the body area

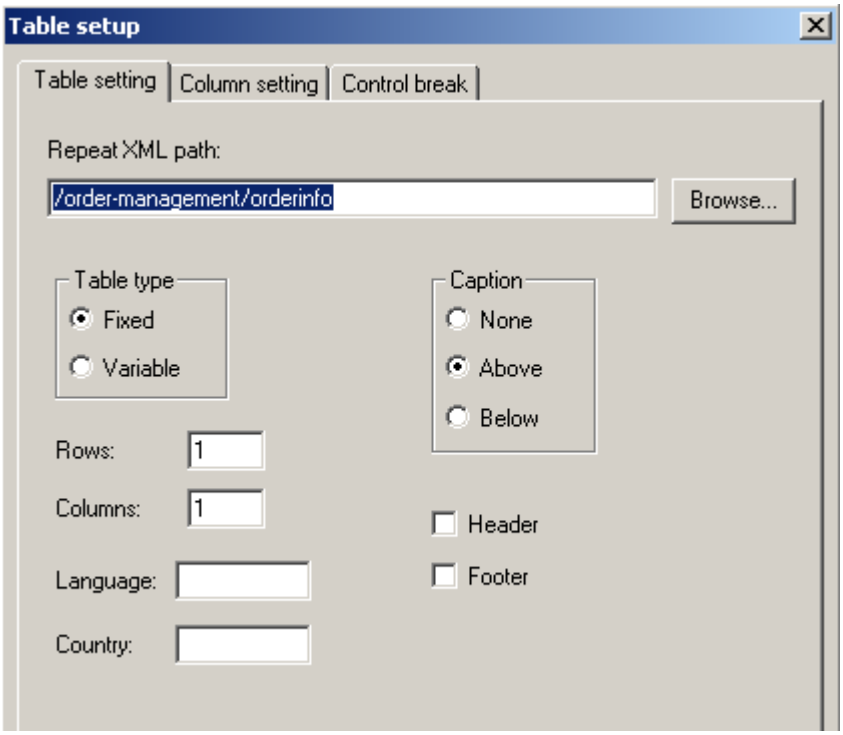
The next step is the body area. First of all, input the title of the report (Order Form) and the company name. Let's arrange those by using text objects.



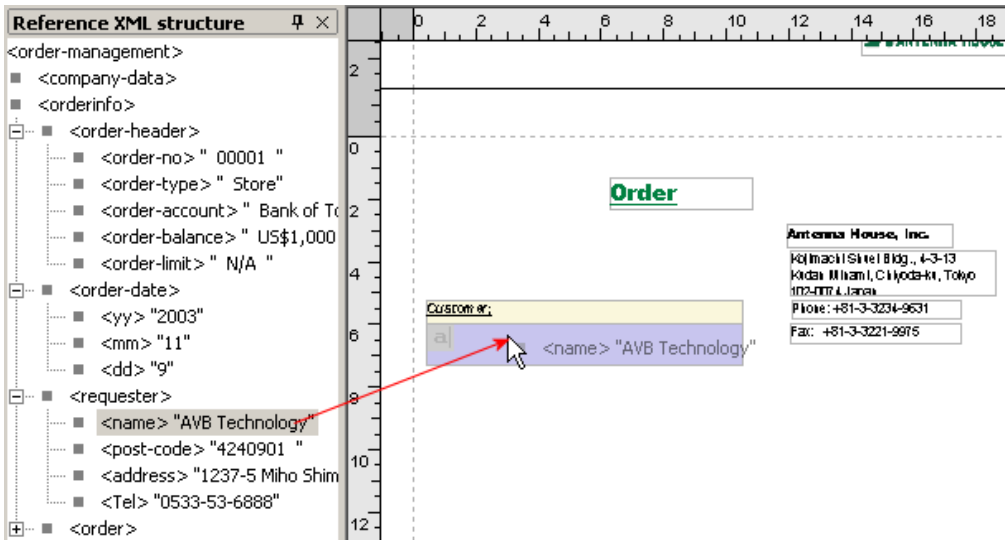
Inserting table objects

For the form we will us tables objects for the customer name and address and order details.

- Customer Name and Address: Table with a caption and one line
  Choose New table from the Object menu and draw a rectangle on the canvas. This will open the "Table setup" dialogue. Specify one row and one column and a caption above. No Header and No Footer.

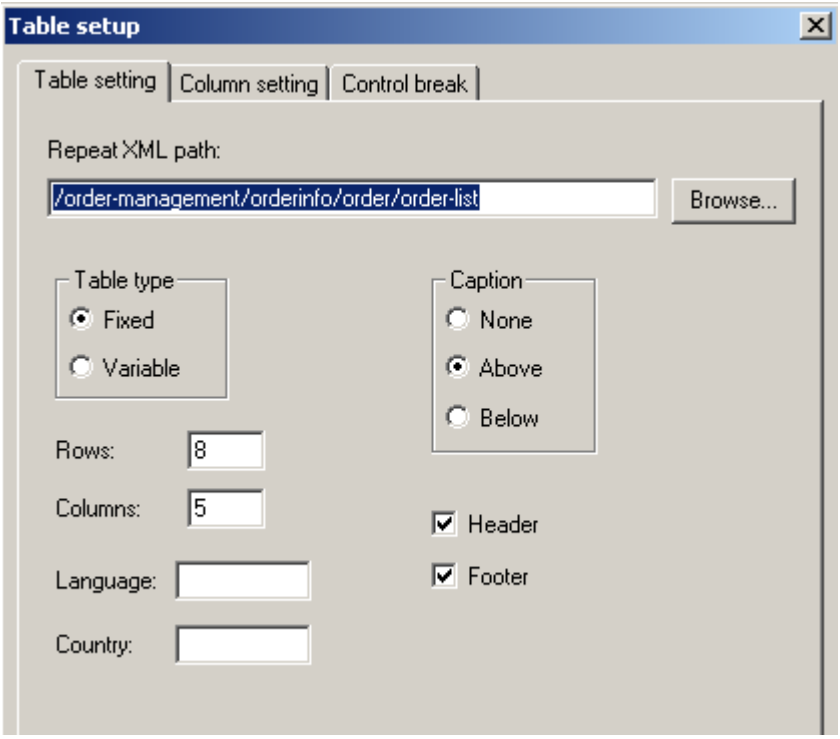


Input the static text "Customer;" in the caption cell. Set the font style to Bold italic and underline. Set Background color of the entire table, and embed the customer name from the element of XML file under the main body of the table. As well as with the page header, you can drag and drop "name" from the Reference XML structure window in order to set the "XML path."



■ Table with multiple rows

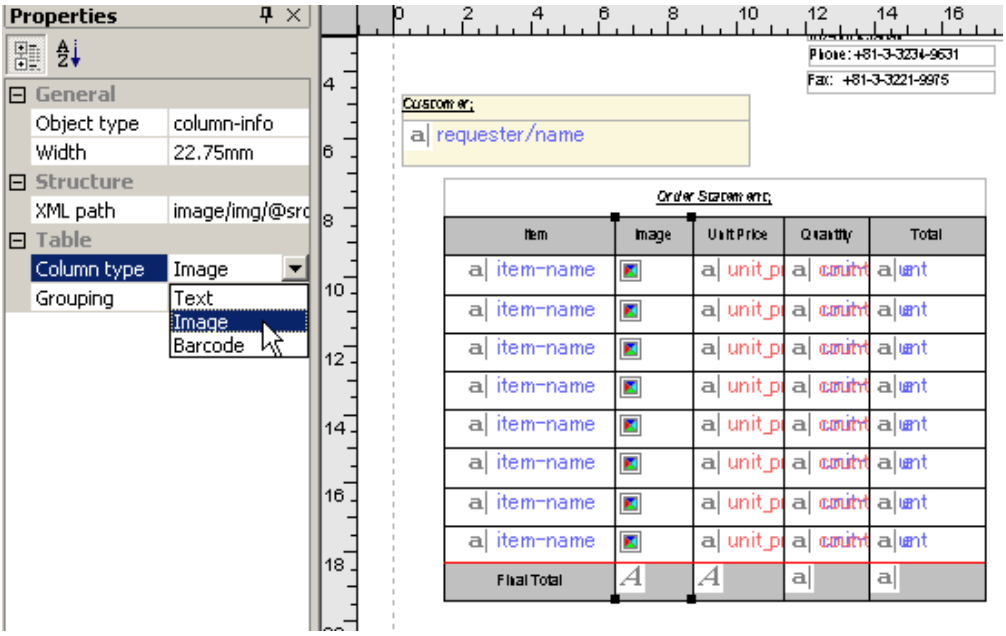
Next, we will make a table for the Order Statement. Again, choose New table from the Object menu and then set the position and the following in the "Table setup" dialogue.



Set the element allocated for the "Repeat XML path" of the table. Here, specify the "order/order-list" element. This element contains the details of the order.

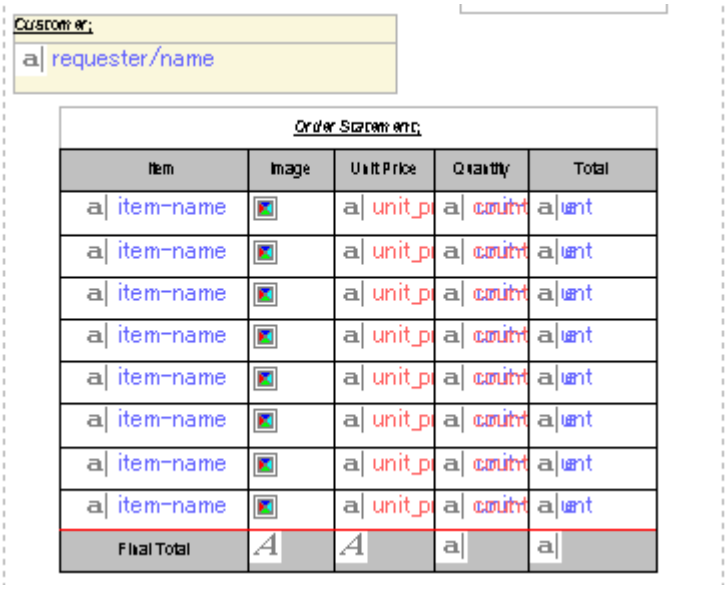
(Note: Table columns can contain either text, images or barcodes. The content of the columns is set through the Table / Setting menu, Column Setting Tab or by selecting the column in the table and then setting the Column type in the Properties window.)
Insert objects (text and image) into each column of the table for the specified number of rows displayed.

At this point in the report layout we will not total the rows our column.



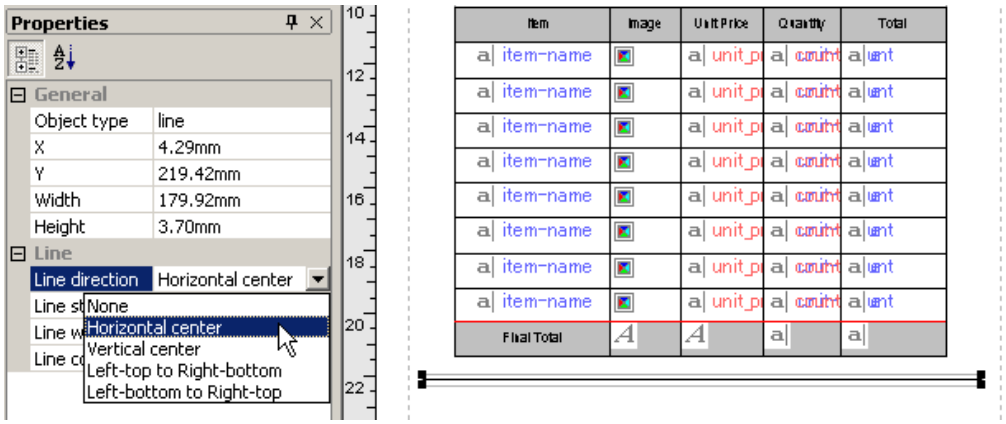
In the column for "Item" set "XML path" so that the "item-name" in the subrepetition is entered in each cell. For the image objects the "XML path" is set to "@scr." Next set the paths XML paths for for "Unit Price" and "Quantity." Leave the total column blank.

When the same setting is done for all lines, the following table is made.



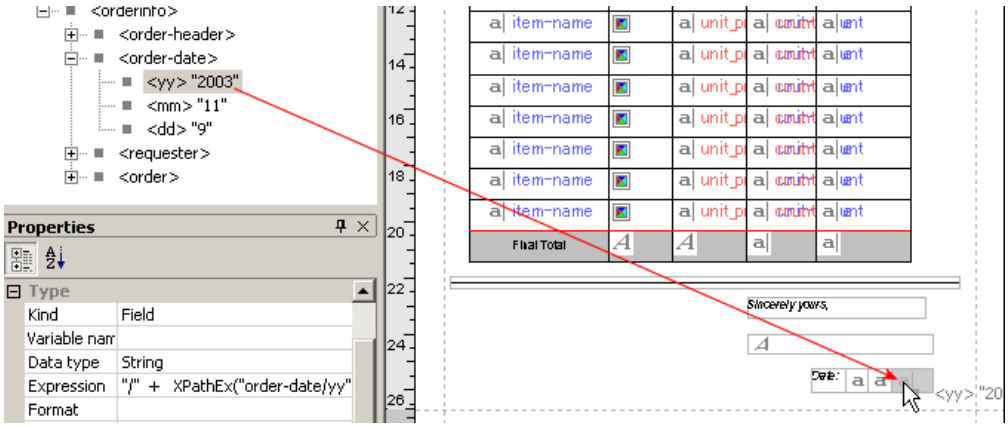
Line object

The Line object is a convenient way to draw vertical, horizontal and diagonal lines. Lines can be solid, dotted or dashed. The direction of the diagonal line can be specified, left-top to right-bottom and left-bottom to right-top. Put a line object under the table to mark the end of the table.



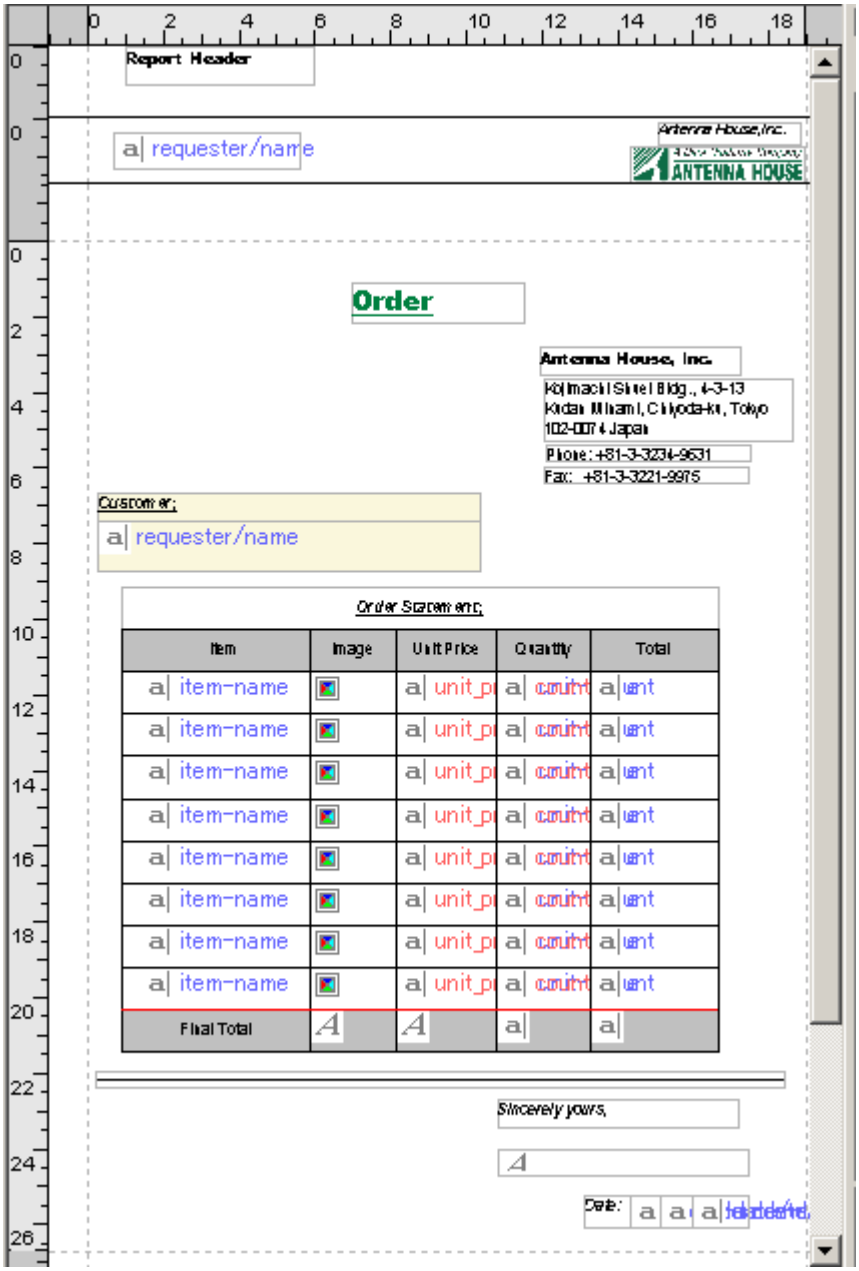
Input the order date

Input the order date by creating a two column table. In the first column put "Date:" In the second column put the "XML path" and expression (XPathEx) illustrated below.
XpathEx["order-date/mm"] + "/" + "XpathEx["order-date/dd"] + "/" + "XpathEx["order-date/yy"]



Input the text for the page footer and report footer at the end.

The report design is completed! The finished project file should look like this.



11.2 Printing and and making a PDF of the report

Save the file

Let's save the project file in two different formats, .rxl and .xsl.

- Project File (order-fix.rxl)
  Use the Save project in the File menu. The .rxl file output is the native file format for XSL Report Designer and works only with XSL Report Designer and the Runtime Engine provided with Report Designer.
- XSL stylesheet (order-fix.xsl)

Use the Save XSL stylesheet in the File menu to save the project as an XSL file. The XSL stylesheet and the XML file can then be transformed into XSL-FO by using an XSLT processor. Some of the properties supported by the .rxl file format are not supported by the XSL stylesheet. XSL Report Designer always works with the rxl file.

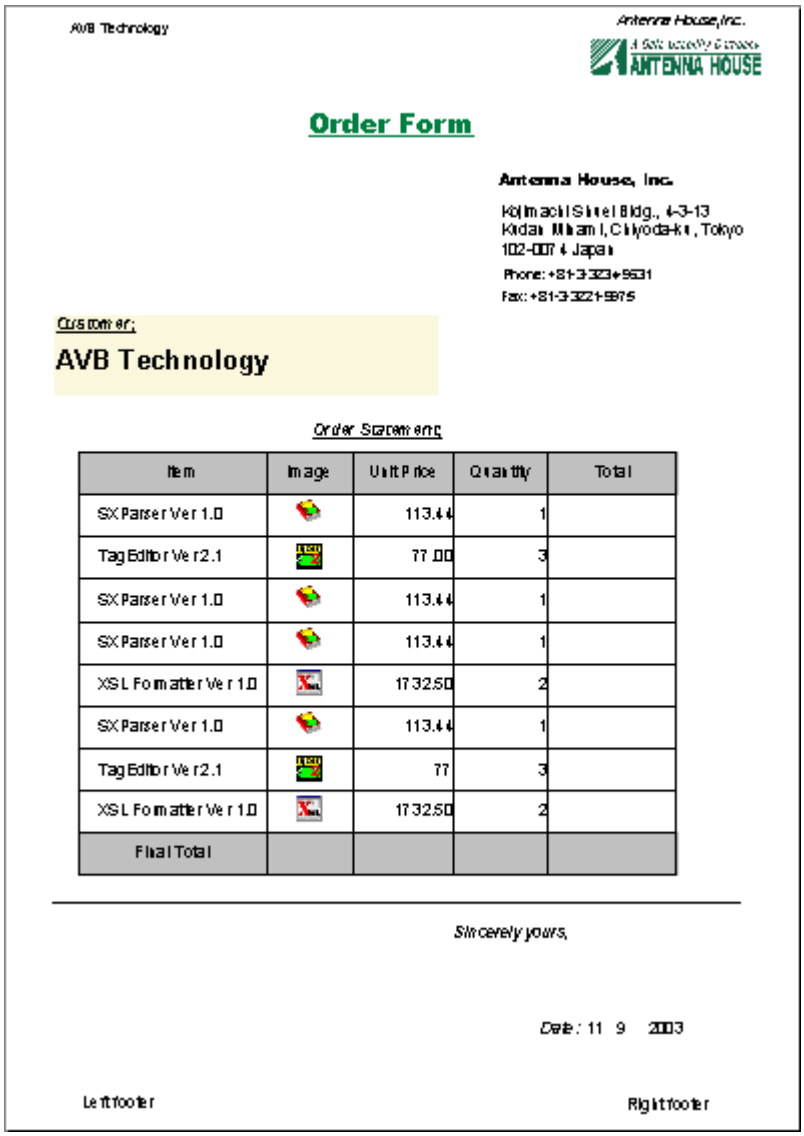
Using XSL Formatter or AH Formatter to Display the finished project

Let's now display the project using both the .rxl file and the XSL stylesheet.

- Display with .rxl project file
  This is done by executing the XSL-FO output and preview command in the Project menu. This is the same layout of the "Order Form" we've have been working with.

- Display with XSL stylesheet
  Again, execute the XSL-FO output and preview in the Project menu, but this time check "Use XSL stylesheet."

  Displayed page 2 using XSL Formatter or AH Formatter.



AVB Technology

Antenna House,Inc.

ANTENNA HOUSE

Order Form

Antenna House, Inc.

Kojimachi Shinei Bldg., 4-3-13
Kudan Minami, Chiyoda-ku, Tokyo
102-0074 Japan
Phone: +81-3-3221-9531
Fax: +81-3-3221-9875

Customer:

AVB Technology

Order Statement

Item	Image	Unit Price	Quantity	Total
SX Parser Ver 1.0		113.44	1	
Tag Editor Ver 2.1		77.00	3	
SX Parser Ver 1.0		113.44	1	
SX Parser Ver 1.0		113.44	1	
XSL Formatter Ver 1.0		1732.50	2	
SX Parser Ver 1.0		113.44	1	
Tag Editor Ver 2.1		77	3	
XSL Formatter Ver 1.0		1732.50	2	
Final Total				

Sincerely yours,

Date: 11 9 2003

Left footer

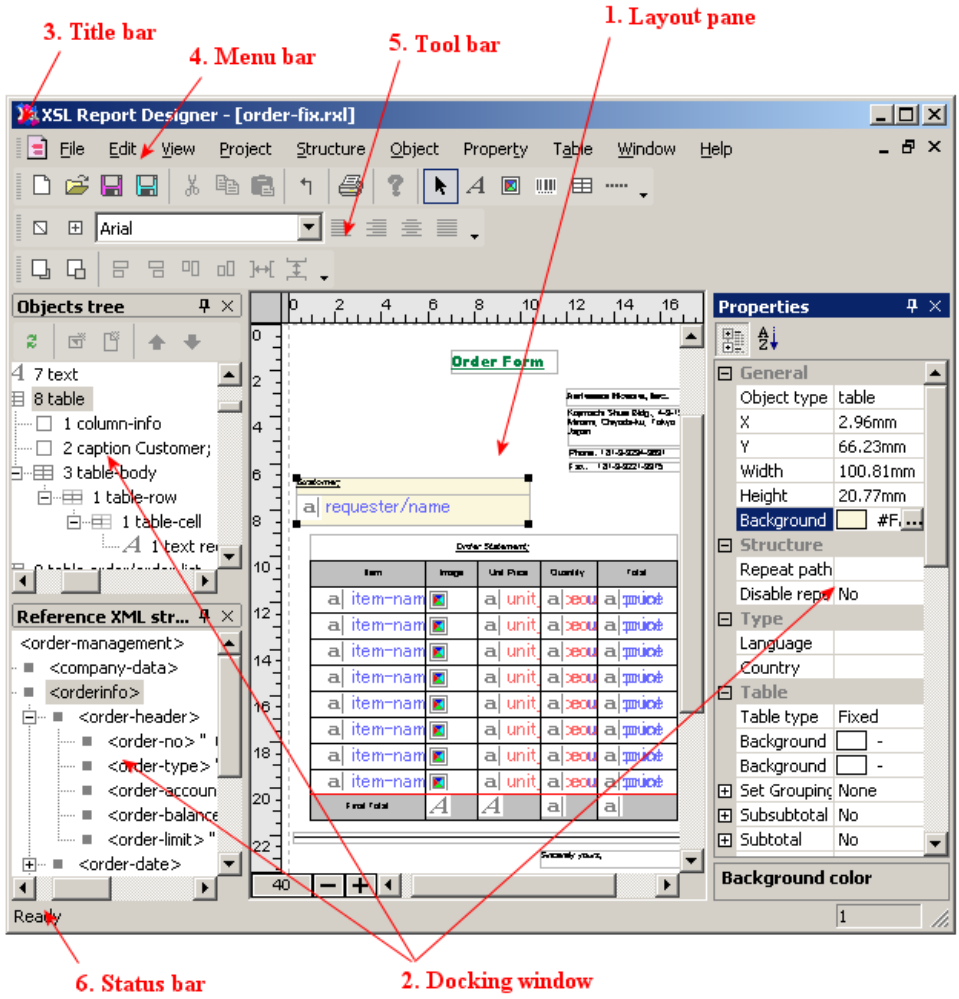
Right footer

Basic operation

This chapter explains details in each part of XSL Report Designer and basic operations.

12 Application Window

The application window (GUI) of XSL Report Designer consists of following elements.



1. Layout Pane or Canvas

   The layout pane is where the WYSIWYG design and layout of objects to be output in the report takes place.

2. Docking windows

   XSL Report Designer has three docking windows surrounding the layout pane.

   - Objects tree window
   - Reference XML structure window
   - Properties window

   Each window can be resized by dragging the edge. All windows can be displayed at the same time. You can also hide the windows when they are not needed.

3. Title bar

The title bar shows the title of XSL Report Designer and the name of the project file that is being edited.

4. Menu bar

   The menu bar contains the following 10 pull-down menus:

   - File
   - Edit
   - View
   - Project
   - Structure
   - Object
   - Property
   - Table
   - Window
   - Help

   Some of menus can be accessed by the context menu which is displayed when the mouse's right button is clicked in the layout pane.

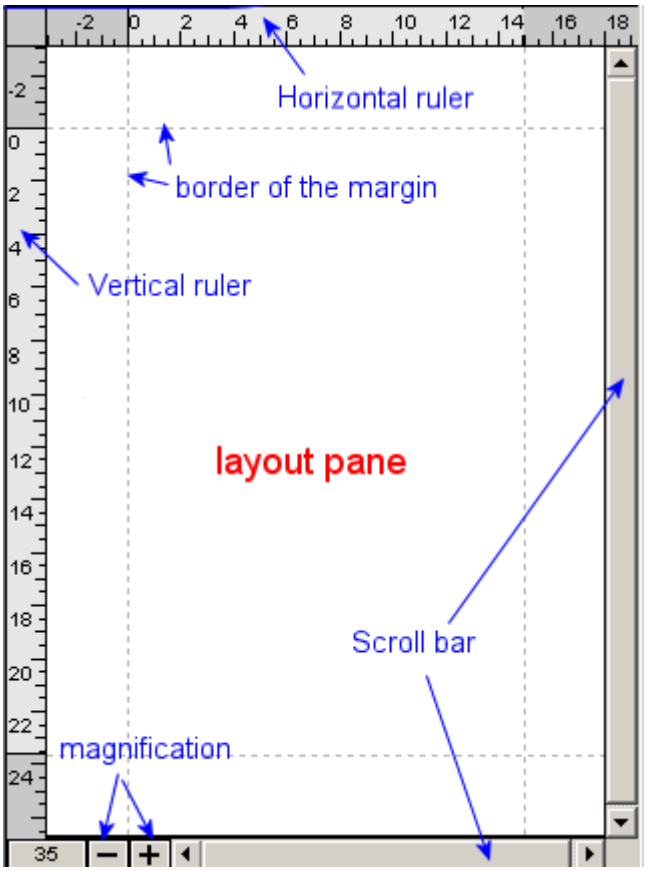
5. Tool bar

   The most commonly used menu functions are available as buttons on the tool bar. You can easily execute these functions by one click of the mouse.

6. Status bar

   The left side of the status bar displays the functions of the icons on the button bar as you pass over them with the mouse. It also displays the status of XSL Report Designer. On the right side of the status bar the current page number and information about the structure such as report header (RH) or page header (PH) are displayed.

12.1 Layout pane



The layout pane consists of a layout area which has a horizontal ruler on top, vertical ruler on the left edge and scroll bars on the right edge and the bottom. In the layout pane you can input, select, cut, copy, paste, move, delete, resize and edit text and the various objects of the design with the mouse and keyboad.

The units set for the scale of the rulers is based on the Paper settings under the Project menu /Page setup / Customize /Paper customize. Paper sizes can be defined in either mm or inches. If the definition is in mm the rulers will display mm and if the definition is in inches then the rulers will display inches. Page margins are shown with a light dotted line. Inside the dotted line is the body and outside is the top, bottom, left and right margins. The area outside the Paper size is dark gray. The size of the margins can be changed by dragging the margin line on the ruler. This will also move the dotted lines on the layout area.

On the bottom left corner of the layout pane are plus (+) and minus (-) buttons to change the magnification of the layout pane. Next to that is a numerical value that you can also click on and change.

Notes for the layout pane;

1. Objects that cannot be selected with the mouse on the layout pane
   The following objects cannot be selected on the layout pane with the mouse. They have to be selected from the Objects tree window.

   - document object
   - repeat object
   - table-header/table-footer object

- table-body object

2. Margins on the page are not displayed for the following:

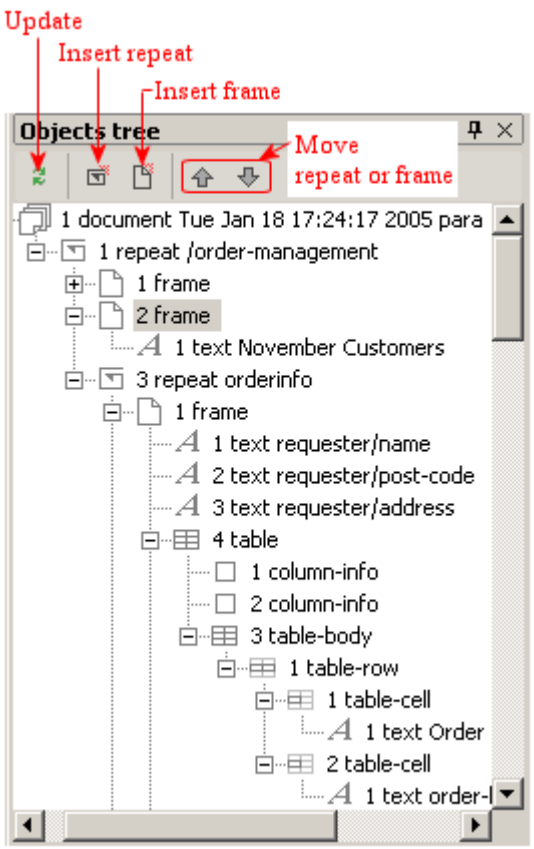
   - Frame object in Flow type.
     Because the final Frame object's position on the paper cannot be specified within a Flow the top and bottom margins are not displayed.

   - Label object in Label type.
     In a Label all objects exist inside the margins therefore no margins are displayed.

   - Header/Footer
     Top and bottom margins of report-header, report-footer, page-header and page-footer are not displayed.

3. Header and Footer in Label type
   The right and left margins within the Header and footer of a Label cannot be changed on the layout pane with the mouse.

12.2 Objects tree window

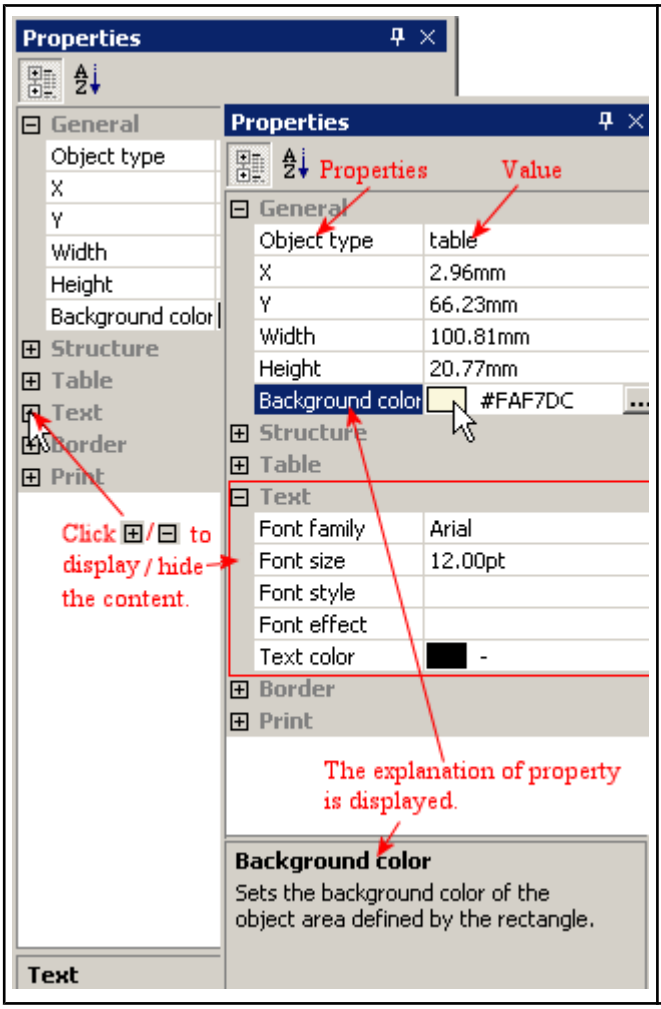


The Objects tree window provides a hierarchical structure view of all objects in the layout pane. Through the Object tree window objects can be selected, cut, copied, deleted and pasted. Frames and repeats can be inserted and moved in the tree.
The object tree functions the same as a general tree view in Windows. Object that cannot be selected on the layout pane such as the document object and repeat objects, etc. can be selected in the Object tree. Selecting a target object in the object tree will highlight those objects as selected in the layout pane.

Object tree Tool bar

The tool bar at the top of the Objects tree window provides buttons to "Update" (refresh the view), "Insert repeats," "Insert frames (page)" and "Move repeats or frames up and down in the structure."

12.3 Properties window

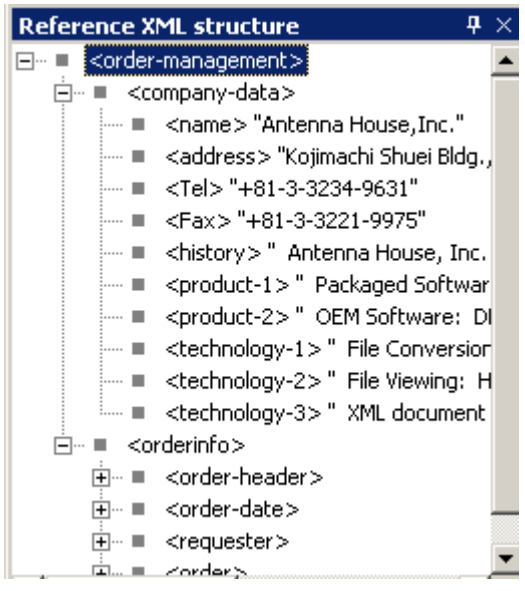


The Properties window is where the attributes are displayed, can be set and changed for objects selected in the layout pane. The list of properties displayed depends on the type of object selected. Please refer to "Properties list" (page 206) for more information about the various properties.
The relevant properties for a selected object are divided into multiple categories of information about the object and then displayed in the Properties window. Each category shows the properties and their values within that group.

1. Properties
   Each Property that can be set for the selected object is shown.
2. Value
   Each Value which can be specified for the property. To add or change a value click in the cell for that value. Property values such as fontsize, width, height and so on are displayed in their relevant units of measure.

You can choose to expand or collapse the contents of an individual category within the Properties window. At the bottom of the properties window an explanation of each property is displayed as the property is selected in the Properties window.

12.4 Reference XML structure window

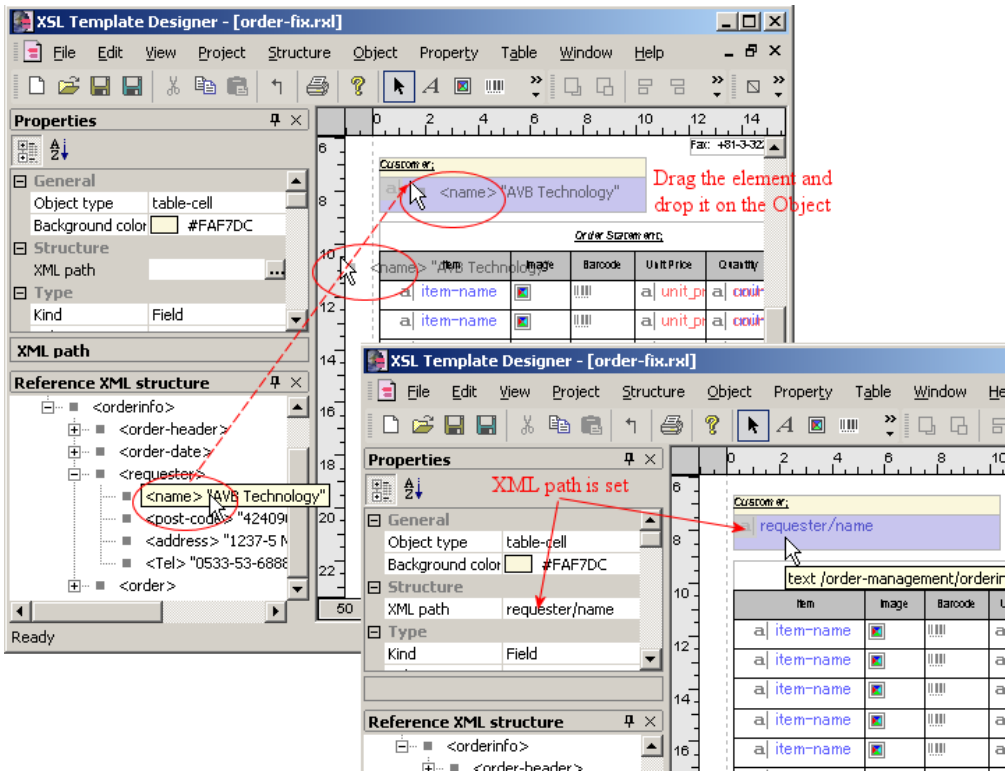


The hierarchical structure of the reference XML data being used for the project is displayed in the Reference XML structure window.
From the reference XML structure the following can easily be set:

- The XML path by dragging and dropping the element onto the object in the layout pane.
- The XML path in an expression by clicking the element to be inserted into the expression.
- Insert text fill.

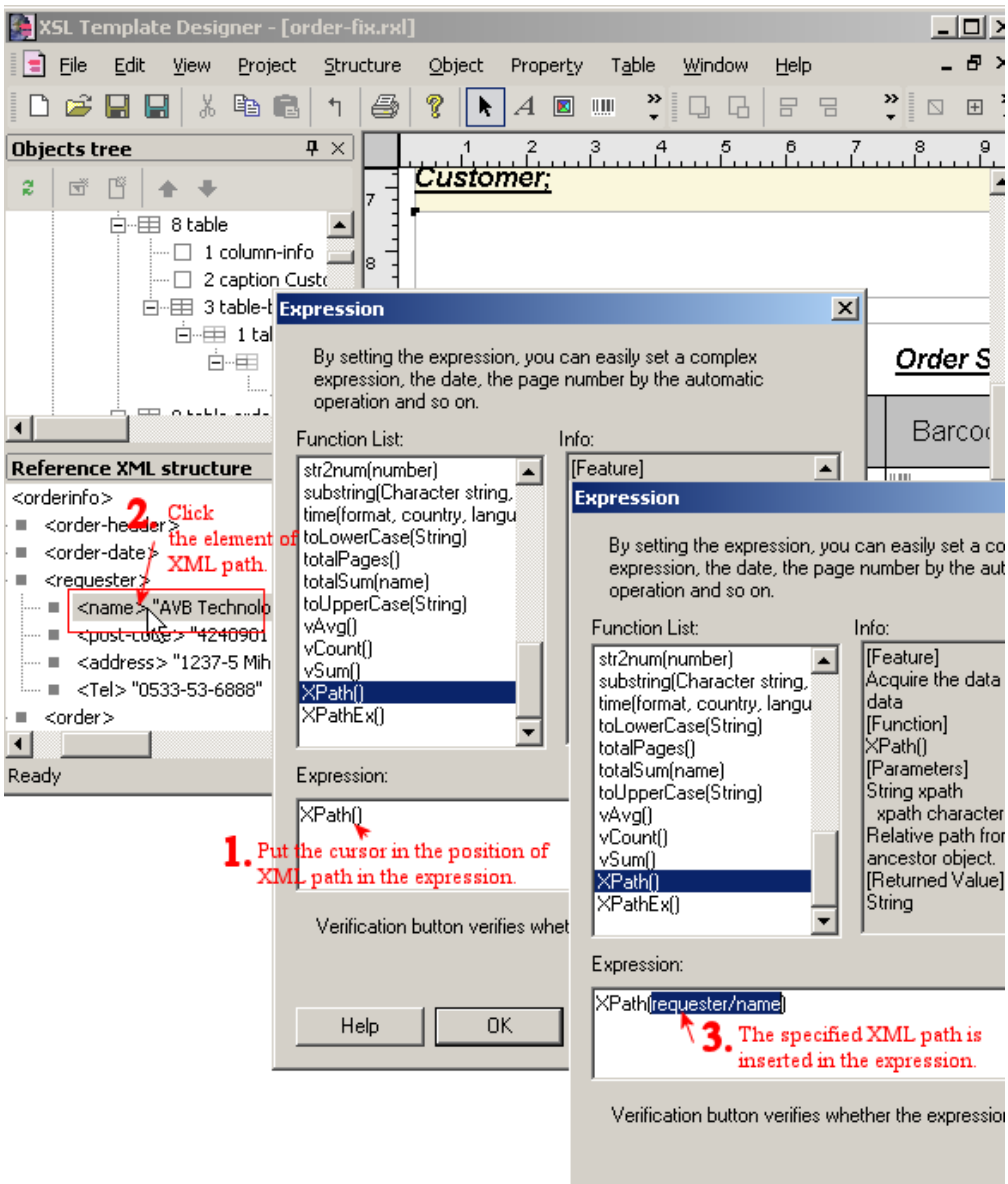
Set XML path by dragging and dropping of element

The Reference XML structure shows a tree view of the data that was specified during the project setup. The XML path of an object in the layout pane can easily be set by dragging and dropping an element from the tree to the object.



Set XML path in the expression by clicking on the element

The XML path and the variable name can be put into an expression by clicking the element in the tree or the object that specifies the variable name.



Either the full or the relative XML path, according to the situation, can be inserted. To insert the full XML path, hold down the [Ctrl] key and click the element.

13 Menu bar

13.1 File

The File menu contains the following functions.

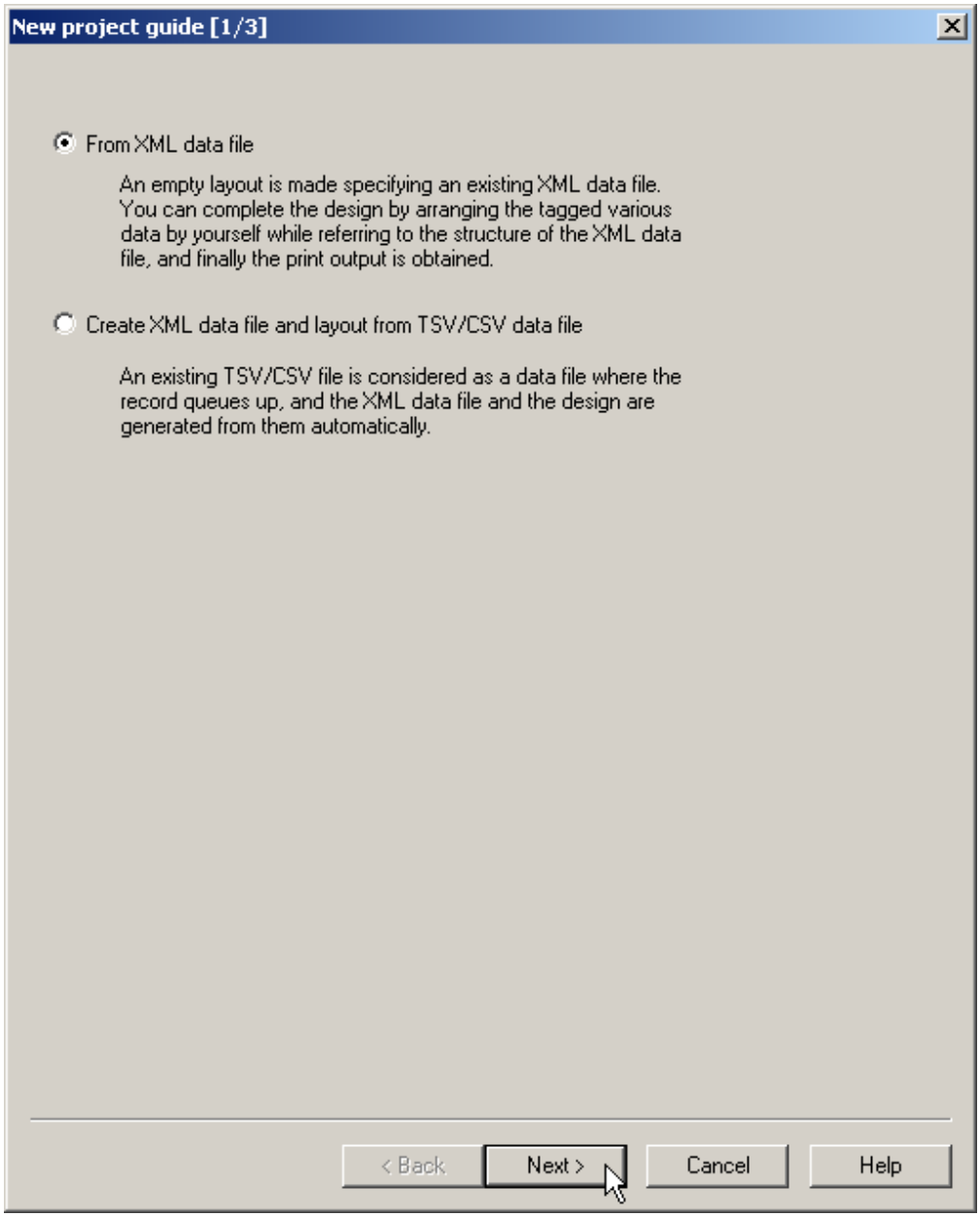
Menu	Description
New project	Makes a new project file. Sets the necessary items with the New project guide.
Open project	Opens an existing project file. An error message box is displayed if the selected file is not a valid XSL Report Designer project file (.rxl) and the file opening process is then discontinued.
Close project	Closes the active project file without exiting the program. If the project has been saved since the last edit then the window closes immediately. If the project has not been saved since the last edit, then you will be prompted as to whether to save the changes to the project.
Save project	Saves (overwrites) the active project file. The first time a project is saved you are prompted for a project name. Subsequent saves will overwrite the previously saved project file.
Save project as	Saves the active project file with a new name by opening the Save As window so that a new file name can be assigned.
Save XSL stylesheet	Saves the current project file as an XSL stylesheet.
Preferences	Opens a dialogue box to set application environment Preferences and how tool tips and other information are displayed on the screen. These settings are independent of the individual projects.
Exit	Quits XSL Report Designer. If there is an open project has not been saved since the last edit, then you will be prompted as to whether to save the changes to the project.

New project guide

In XSL Report Designer when you select New Project a New project guide that consists of 3 pages will open up. The New Project Guide will then take you through the initial steps necessary to set up the project.

New project guide [1/3]

[1/3] First select what type of data the input file will be; "From XML data file" or "Create XML data file and layout from TSV/CSV data file." This is the data file structure that XSL Report Designer will expect for the project.

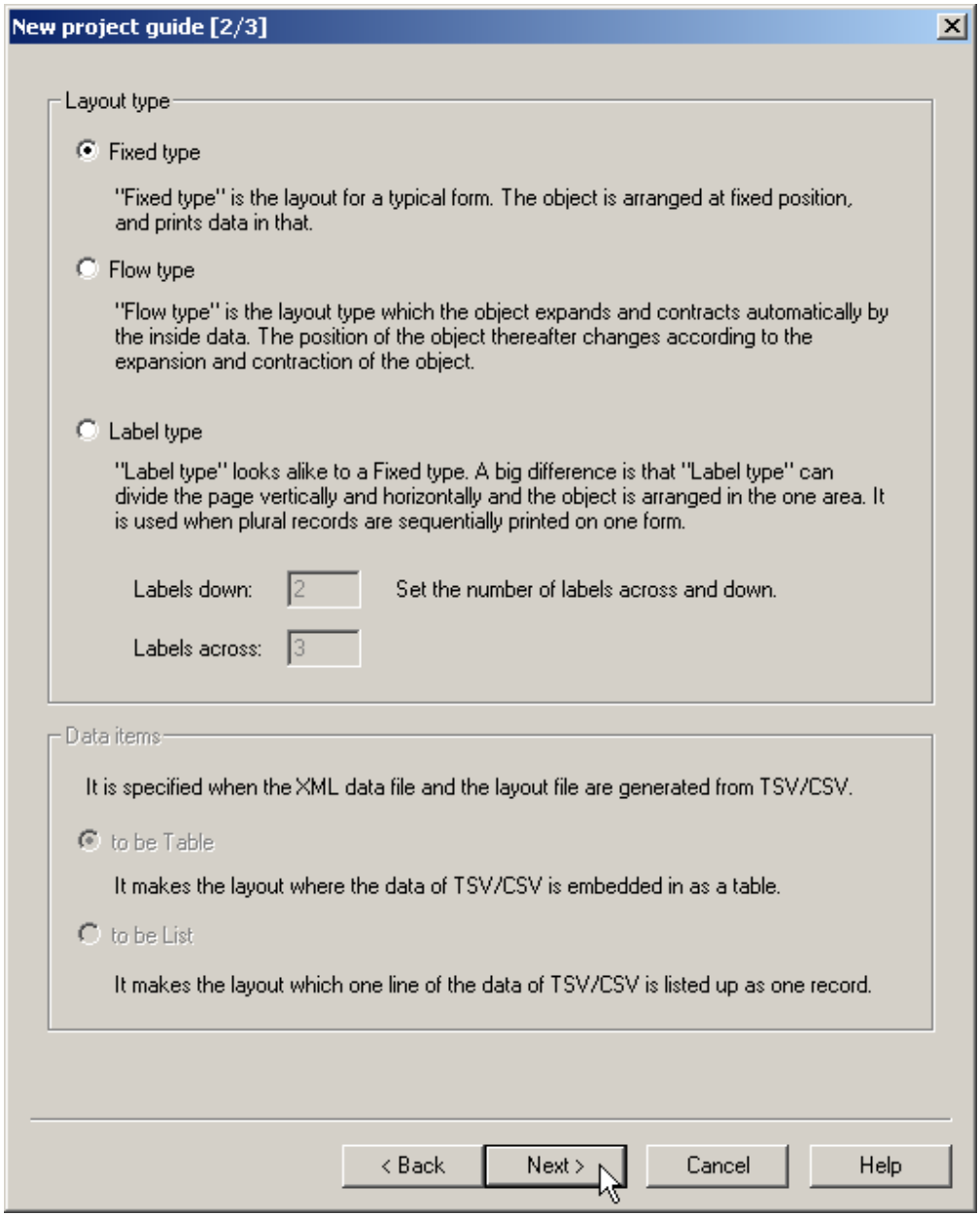


- From XML data file
  This is an existing XML data file that will then be referenced in the XML structure window as you make a project.

- Create XML data file and layout from TSV/CSV data file
  An existing TSV (Tab Separated Values) or CSV (Comma Separated Values) file is considered to be a data file where the records are then queued up and an XML data file is automatically generated by XSL Report Designer based on the TVS/CSV file. The resulting XML data file is then used as the reference XML structure for the project file.

New project guide [2/3]

[2/3] Next, the guide requests that you select the layout type for the report.



■ Layout type
XSL Report Designer has three layout types to select from. These are:

1. Fixed type
2. Flow type
3. Label type

When a TSV/CSV file is the source the layout is always a Flow type.

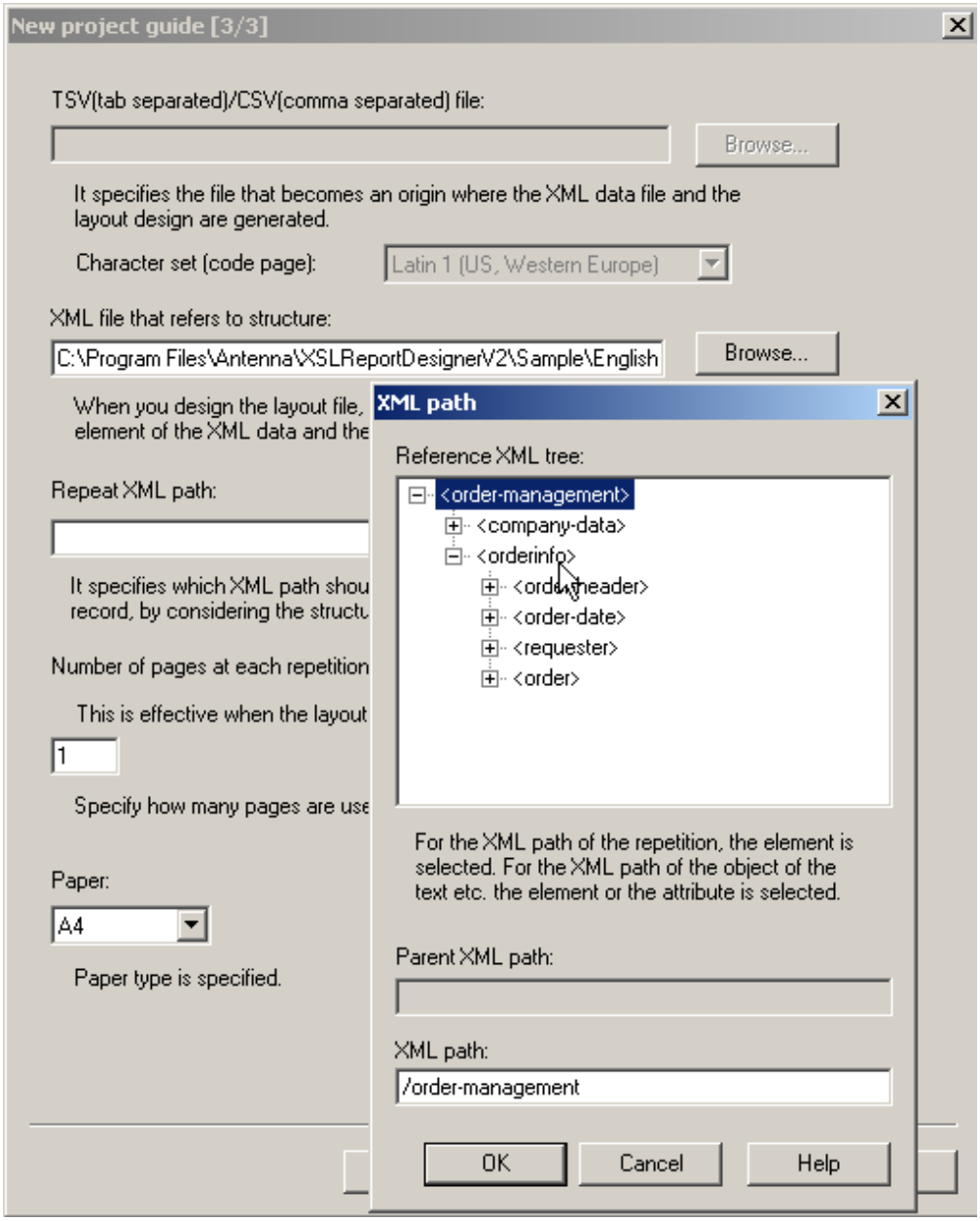
■ Data items
Specifies how to display each line when using a TSV/CSV file. This setting controls how the default layout of a project is automatically made.

If "to be Table" is selected

A table will be made from the TSV/CSV data in the project where one line of data equals one row of the table. (Output example (page 127))
If "to be List" is selected
A list will be made from TSV/CSV data in the proejct where one line of data equals one record in the list. (Output example (page 127))

New project guide [3/3] (For the use of XML data)

[3/3] Specifies the XML data file that will be used as sample data for formatting with the Project. In the XML path the repeat element for the report is specified. Paper size and page orientation are also selected on this page of the New project guide.



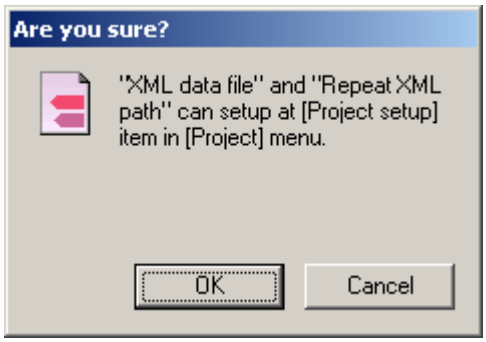
■ XML file that refers to structure
Set the path to the XML file you will use as sample data for the project. The Browse button opens the dialogue for the file list.

- Repeat XML path
  Specifies the path to the main repeat element in the XML data. When you print or generate PDF from XML data the number of reports created will be equal to the number of times the main elements appears in the data.

- Number of pages at each repetition
  Only available for the Fixed layout type. You can specify the number of pages produced by each record. For instance, for each record you can specify that the front cover is the first page and details are on the second page. In this case each record would produce two pages and the specified number of pages would be two.

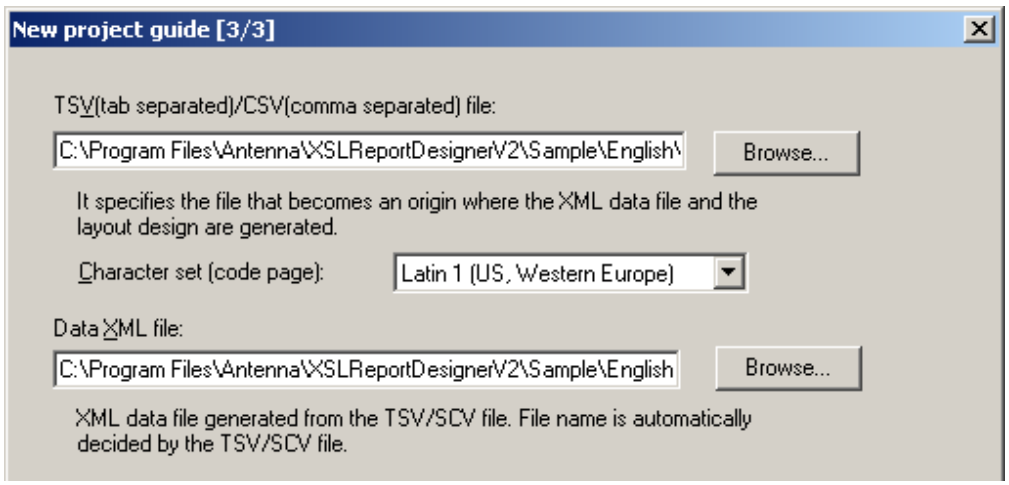
- Paper
  Here you can select from predefined paper sizes through the pull-down menu. You can also create custom paper sizes through the Project / Page setup menu. Custom paper sizes become available through the pull-down menu.

When the XML path and the Repeat XML path are not specified here, the following message is displayed. They can be specified later through the Project setup dialogue in the Project menu.



New project guide [3/3] (For the use of TSV/CSV data)

When TSV/CSV data file is selected as the data source, the XML file that refers to the structure is automatically created from the TSV/CSV file.



- TSV (tab separeted)/CSV (comma separated) file
  Set the path to the TSV/CSV file you want to use. An XML data file is generated automatically based on the TSV/CSV file specified here. The Browse button opens the dialogue for the file list.

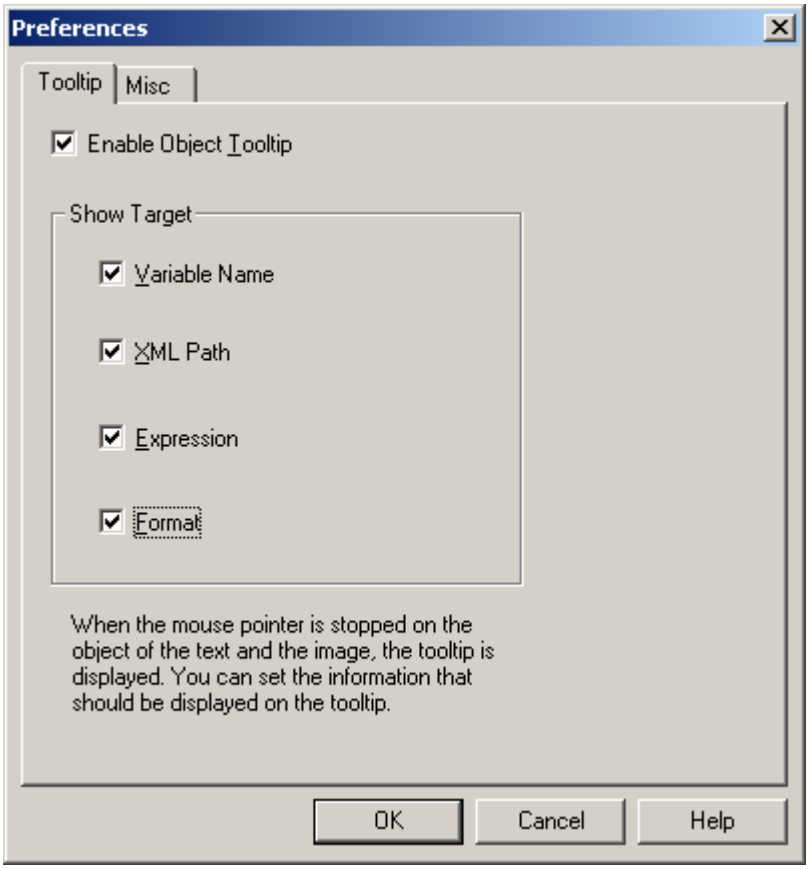
- Character set (code page)

Here is where the character set/language used for the TSV/CSV is specified. Generally Latin 1 is common in Western Europe. Japanese (shift JIS) is common in Japan. If a code page for special characters is used it can be selected here. The XML file that is created from the TSV/CSV data is converted into UTF-8.

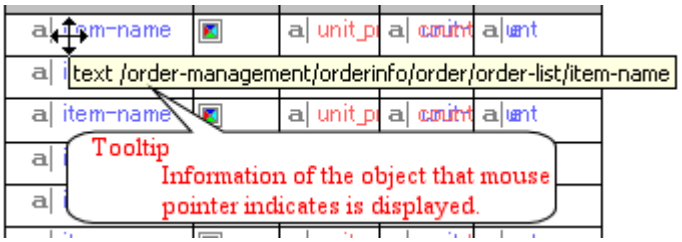
- Data XML file
  Specify the place to save the XML file generated from TSV/CSV file automatically. A default file name is automatically set, but you can change it.

Preferences dialogue

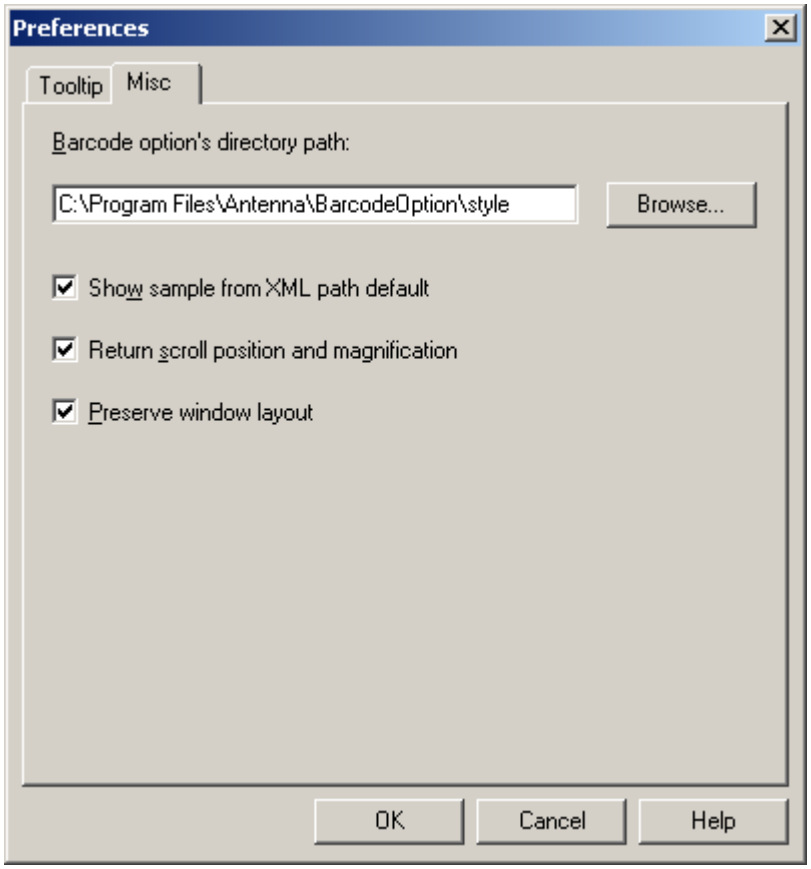
Tooltip



When the mouse is stopped on an object the tooltip for the object is displayed. The tooltips are displayed for the targets checked here.



Misc



- Barcode option's directory path
  Set the path for the directory of XSL Formatter Barcode Option or AH Formatter Barcode Option. This setting is used when barcode objects are contained in a project file saved as an XSL stylesheet.

- Show sample from XML path default
  When this is checked the data content and attributes of elements from the first main repeat of the XML data will be displayed in the objects in the project on the layout pane (Show sample from XML path). This value can be changed in the View menu while project is being edited.

- Return scroll position and magnification
  When selected XSL Report Designer saves the scroll prosition and magnification for a project and then restarts at the saved settings.

- Preserve window layout
  When checked XSL Report Designer starts with its various windows in the same position they were in when XSL Report Designer was exited. If unchecked then XSL restarts with the docking windows in the default setting.

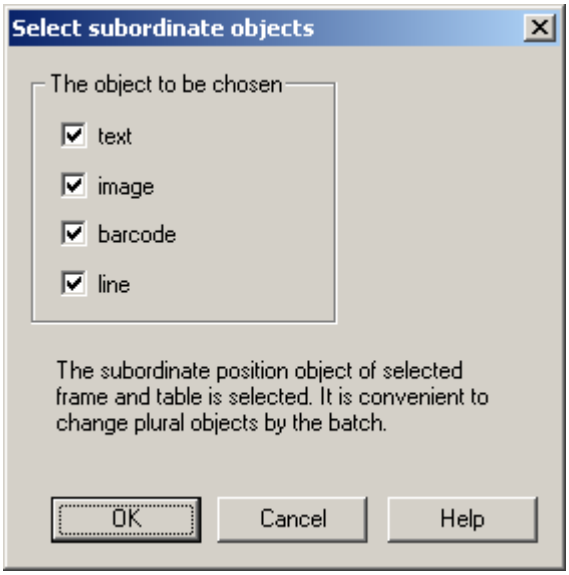
13.2 Edit

The Edit menu contains the following functions.

Menu	Description

Undo	Cancels the last operation.
Redo	Cancels the last undo action.
Cut	Removes the selected object and places it on the Clipboard. Table-columns and table-lines can be deleted but not cut.
Copy	Copies the selected object and puts it on the Clipboard.
Paste	Pastes the object from the clipboard.
Clear	Deletes the selected object without putting it on the clipboard.
Stick	When the apical positions of the object and the other object are close to each other while dragging the object, they stick to each other automatically so that their apical positions may become the same coordinates. It behaves like a magnet. The stick function cannot be used when the grid is effective.
Select Parent	The parent object of selected object is then also selected.
Select Sub.Objects	The subordinate position object of selected frame and table is selected on the Select subordinate objects dialogue.
Insert text fill	XML path can be set between text and text in the text object in order to insert variable data. Multiple XML paths can be arranged.
Select last modified object	The last modified object (such as changed Properties) is selected.

Select subordinate objects dialogue

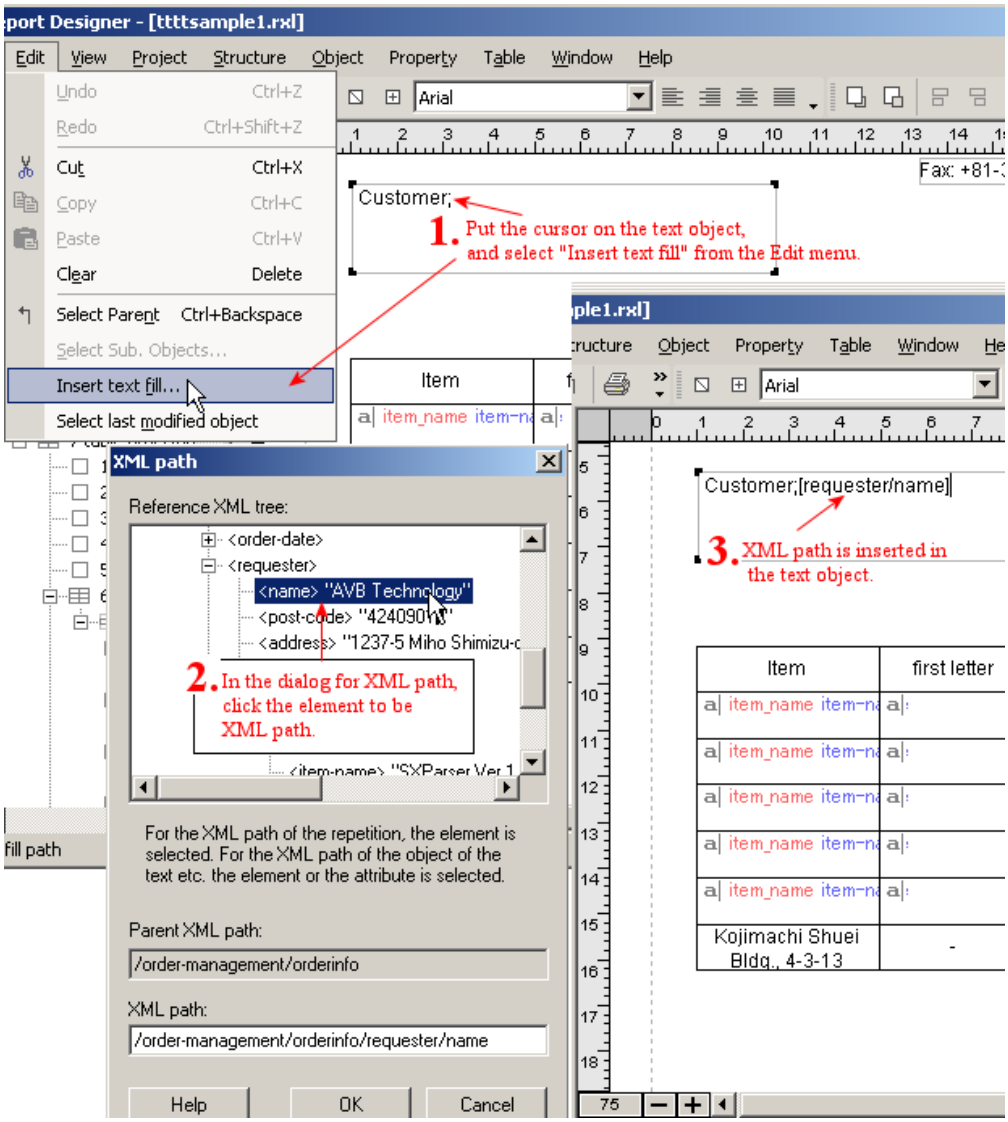


It is convenient to change multiple objects all at once. The objects that can be selected are text, images and barcodes.

Insert text fill

Multiple XML paths can be arranged to input text in a text object. An example of this would be where a name and member number were inserted in the body of a letter.

To use this function, put the cursor in the text object where you want to insert the data from the XML path and then choose "Insert text fill" from the Edit menu.



13.3 View

The View menu contains the following functions.

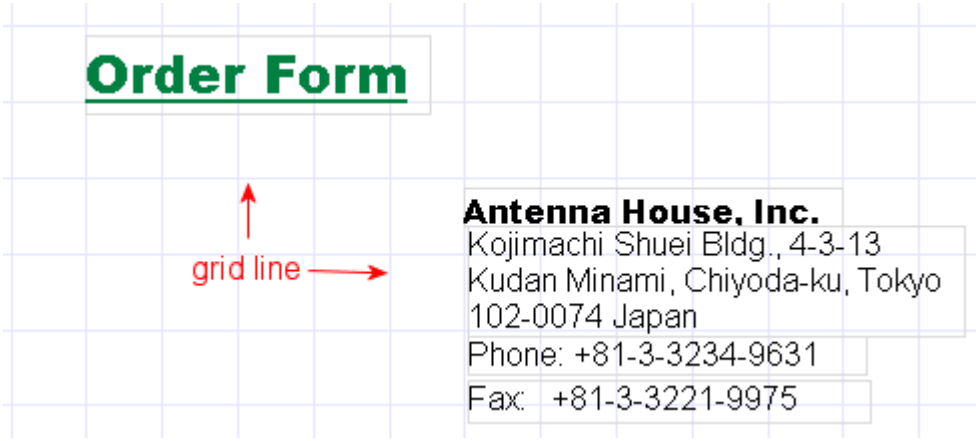
Menu	Description
Objects tree	Displays the Objects tree docking window.
Properties	Displays the Properties docking window.
Reference XML structure	Displays the Reference XML structure docking window.
Standard	When checked the standard tool bar is displayed. When unchecked the standard tool bar is switched off.
Object	When checked the Object tool bar is displayed. When unchecked it is turned off.

Arrange	When checked the Arrange tool bar is displayed. When unchecked it is turned off.
Status bar	When checked the Status bar is displayed. When unchecked it is turned off.
Magnification	By clicking on Magnification you can then select to zoom "Up" (increase the magnification), zoom "Down" (reduce the magnification), "Fit to window width" (fits the page width to the width of the layout pane) and "Set" the magnification to a user specified percent.
Grid	Opens the Grid dialogue. Both horizontal and vertical grid lines are turned on within the layout pane. Grid lines are non-printing and are used to measure and arrange objects.
Show sample from XML path	When this is checked the data content and attributes of elements from the first main repeat of the XML data will be displayed in the objects in the project on the layout pane.

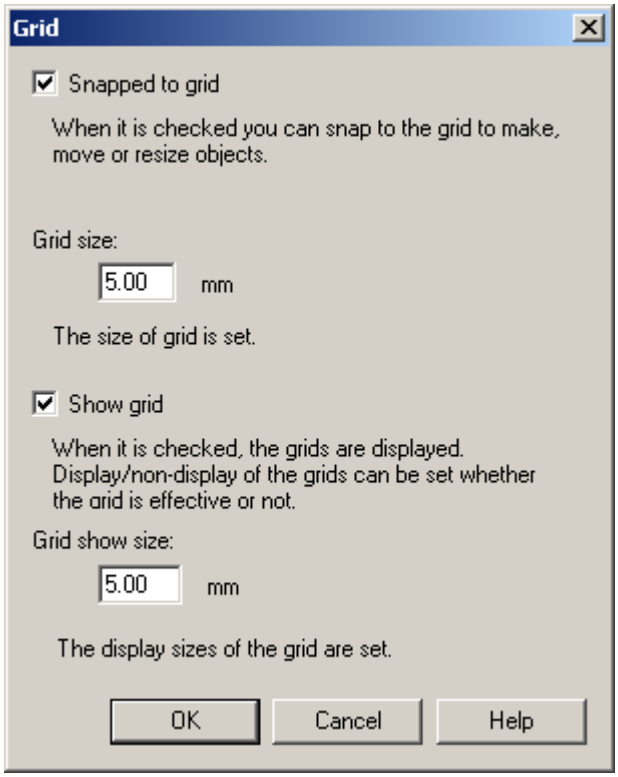
Grid dialogue

Both horizontal and vertical grid lines can be turned on within the layout pane. Grid lines are non-printing and are used to measure and arrange objects.

Show grid:



The grid settings can be specified in the Grid dialogue.



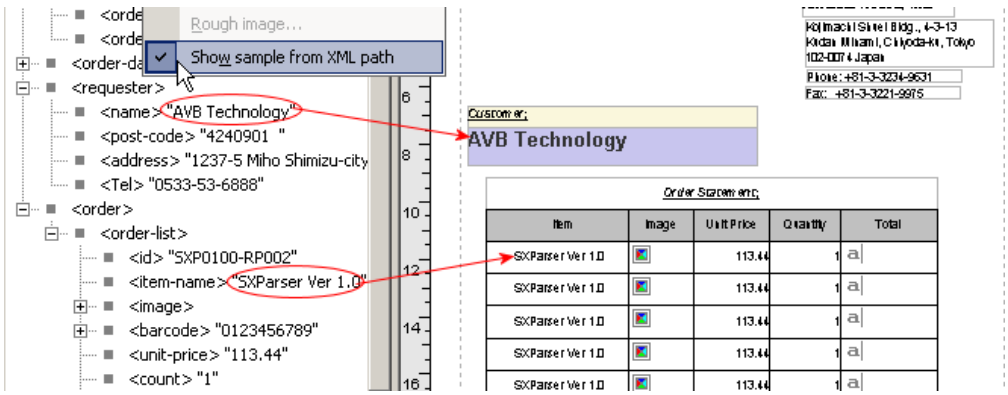
- Snapped to grid
  When it is checked you can snap to the grid to make, move or resize objects. The size of grid is set in the Grid size. The Grid does not have to be displayed for Snapped to grid to work.

- Show grid
  When it is checked the grid is displayed. When unchecked the grid is not displayed. The grid size for display in the layout pane is set in the Grid show size.

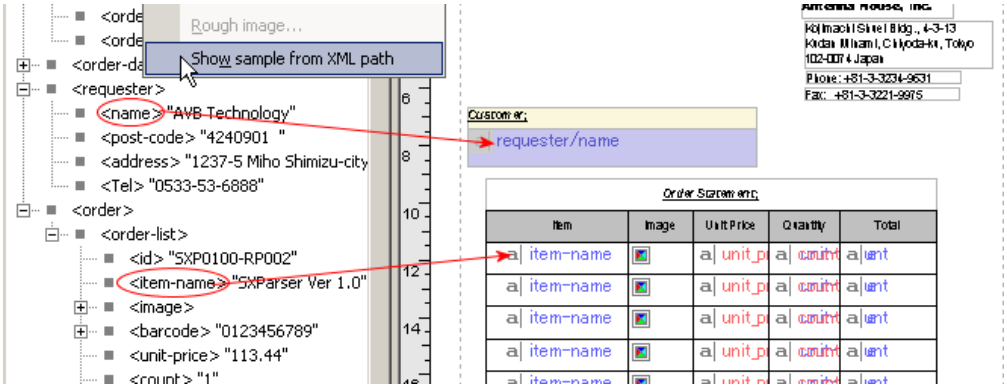
Show sample from XML path

When this is checked the data content and attributes of elements from the first main repeat of the XML data will be displayed in the objects in the project on the layout pane.

This is the sample data displayed in the Reference XML structure window.



When "Show sample from XML path" is not checked the XML path will be displayed in the object.



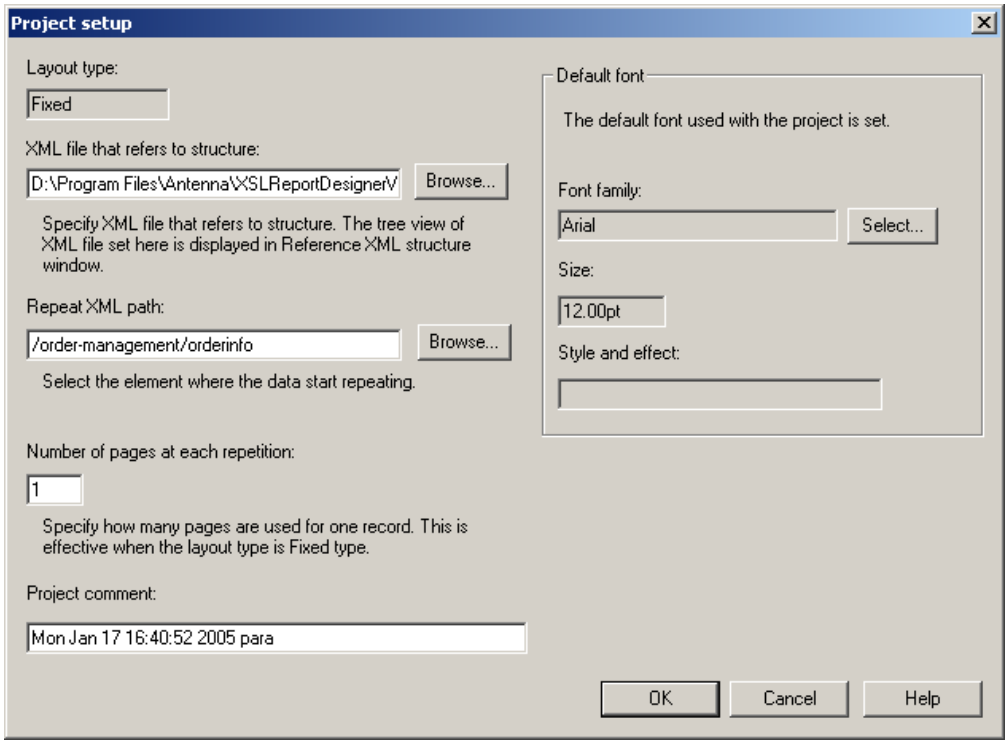
13.4 Project

The Project menu contains the following functions.

Menu	Description
Project setup	This starts the Project setup dialogue where properties concerning the project setup are set.
Page setup	This opens the Page setup dialogue for setting the page properties.
XSL-FO output and preview	Produces XSL-FO by transforming the reference XML data using the project file and then formats the XSL-FO with XSL Formatter or AH Formatter so that it can be previewed. The XSL-FO output and preview dialogue also is where necessary information is set of output and preview.

Project setup dialogue

This is where selected Properties concerning the project settings can be set and changed.



- Layout type
  The layout type set when a new project file is initially set up is displayed. It cannot be changed.

- XML file that refers to structure
  Here the XML file that refrers to structure of the data file is specified.
  By setting this the tree view of XML file can be displayed when the XML path is to be set. You can easily select XML paths (elements) from the tree view. The Browse button opens the dialogue for the file list.

- Repeat XML path
  This is where the data position in the XML path start repeating to generate a new report is specified. Clicking the Browse button opens XML path dialogue of the XML file set above in the "XML file that refers to structure." You can then easily select the repeat from that view.

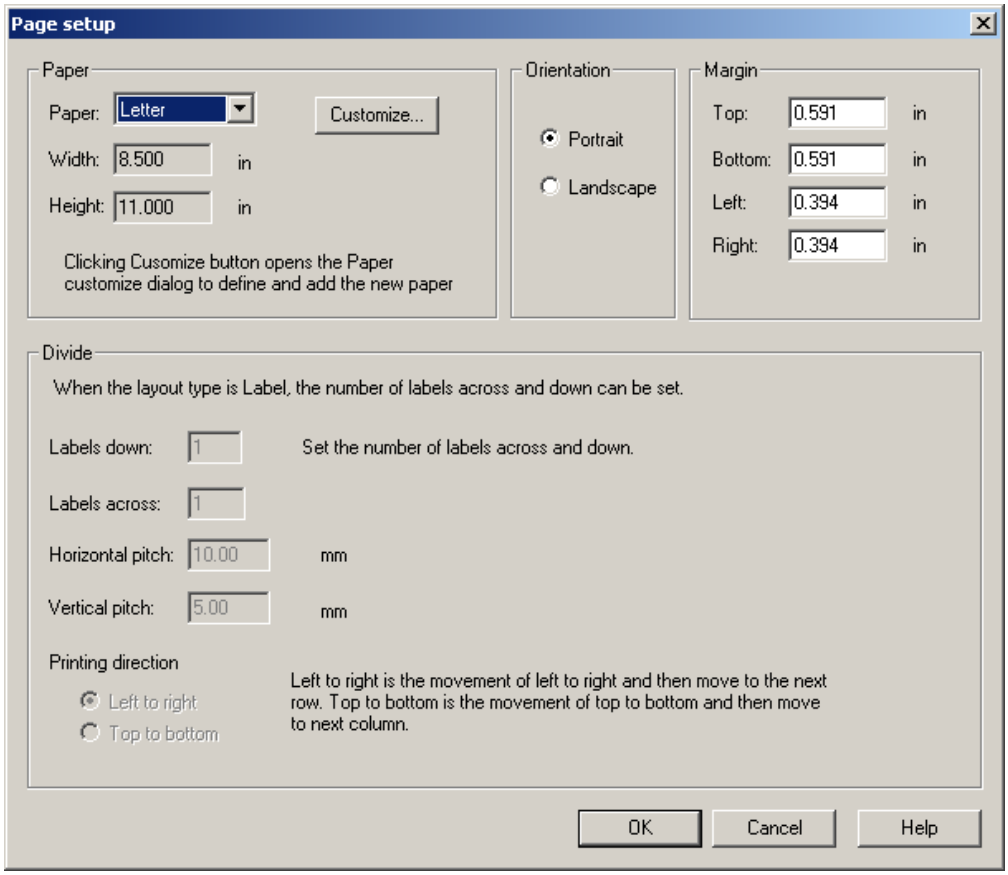
- Number of pages at each repetition
  This specifies how many pages are used for one record. This is effective only for Fixed type layouts.

- Default font
  The default font used with the project file is set here. When the Select button is clicked the Font dialogue opens so that the font family, style, size and effects can be selected.

- Project comment
  The comment character string can be freely described as it has no effect on the project or the print results.

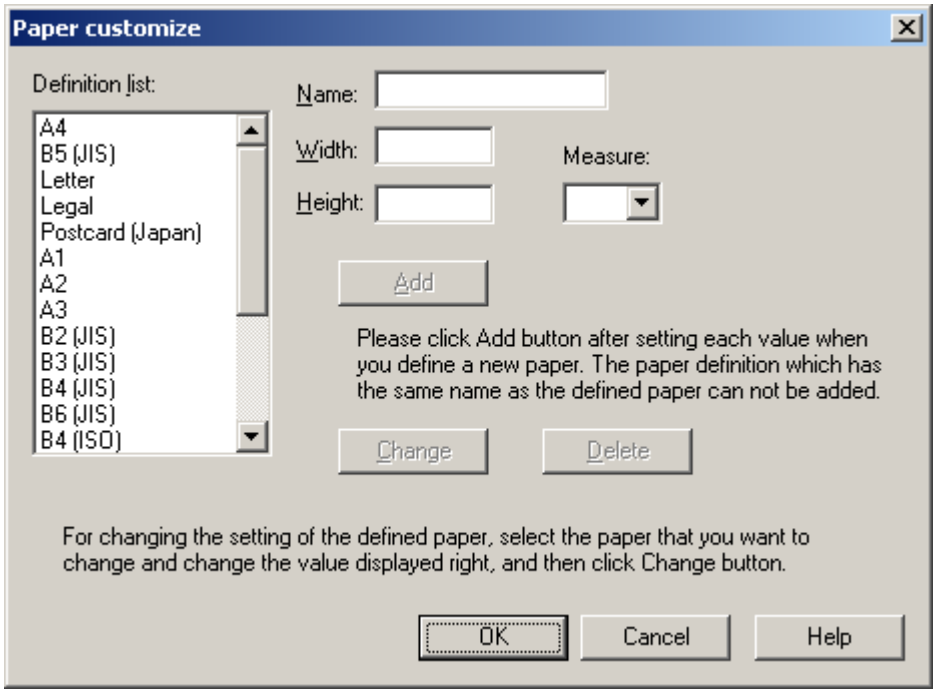
Page setup dialogue

Through this menu Properties concerning the page setup are specified.



■ Paper

This is where the paper size is specified by selecting the paper from the combo box of "Paper." The size of width of paper is displayed in "Width" and the height of paper is displayed in "Height." A4 and B5 paper sizes are the default sizes. Clicking the Cusomize button opens the following Paper customize dialogue to define and add the new paper sizes.



- Definition list
  This displays the list of paper sizes that have already been defined. To change the settings of a defined paper select the paper and change the values displayed to the right. When finished click the Change button to save the changes.

- Name
  Input the name for the defined paper type.

- Width
  Input the width of the paper.

- Height
  Input the height of the paper.

- Measure
  The unit of measure used for the defined paper is selected from the combo box. The units that can selected are mm (millimeter) and in (inch).

- Add
  Click the Add button to save the settings when you finish setting each value a new paper definition. Uniques names are required for each paper definition.

- Change
  Click Change to save changes to existing paper definition values.

- Delete
  Deletes a paper definition. Select the definition to be deleted and then click on the Delete button.

- Orientation
  This sets whether the page prints "Portrait" or "Landscape."

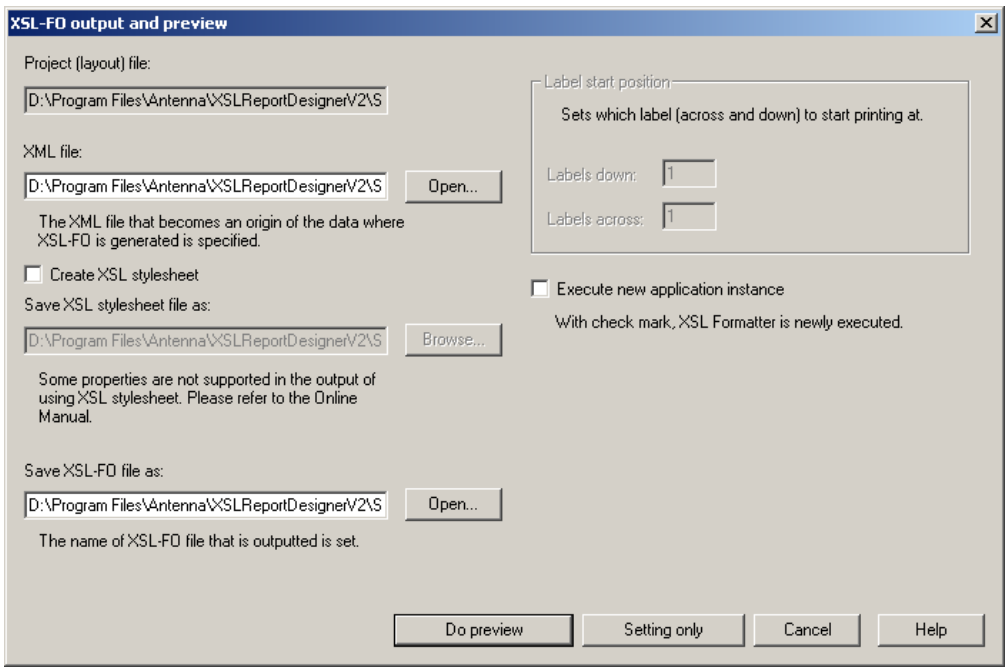
- Margin
  Sets the top, bottom, left and right margins for the paper. The Margins use the same unit of measure as the paper size.

- Divide
  When the layout type is set as Label type the number of labels of rows and columns in the paper is set.

  - Labels down
    This defines how many vertical units/rows the page is divided into.
  - Labels across
    This defines the number of horizontal units or columns the pages divided into.
  - Horizontal pitch
    This is space for labels across.
  - Vertical pitch
    This is space for labels down.
  - Printing direction
    This defines the direction data is printed on the labels. "Left to right" is the movement of left to right printing columns and then move to the next row. "Top to bottom" is the movement of top to bottom printing rows and then move to the next column.

XSL-FO output and preview dialogue

For XSL-FO output and preview the Runtime Engine processes the sample XML data used for the project with the project file. Once XSL-FO is generated it then executes XSL Formatter or AH Formatter. XSL Formatter or AH Formatter renders the XSL-FO and displays it on the preview screen. If the project file has not yet been saved the Save dialogue is displayed before the XSL-FO output and preview dialogue is opened.



- Project (layout) file
  This is where the name of the project (layout) file is displayed.
- XML file
  The XML data file that is referred for the output and preview. The Open button opens the dialogue for the file list.

- Create XSL stylesheet file
  When checked a XSL stylesheet is created and then used to make the XSL-FO file. An XSLT processor is required to convert XSL-FO from XML file and XSL stylesheet. Please refer to the online manual of XSL Formatter or AH Formatter for details on setting up the XSLT processor environment.

- Save XSL stylesheet as:
  Specifies the XSL stylesheet used for conversion. The Browse button opens the dialogue for the file list.

- Save XSL-FO file as:
  This is where the name of output XSL-FO file is set. The Open button opens the dialogue for the file list.

- Label start position
  When the layout type is Label sets the position on the paper (across and down) where the first label will begin to print.

- Execute new application instance
  When checked a new copy of XSL Formatter or AH Formatter will be started.

- Do preview
  Creates the preview by converting the XML data to XSL-FO using the project file and then if there are no errors starts XSL Formatter or AH Formatter.

- Setting only
  Saves changes to the settings without doing an output and preview.

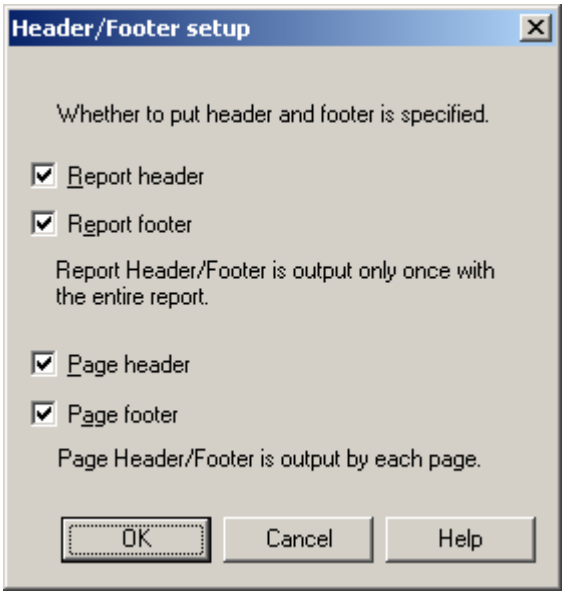
- Cancel
  Cancels any changes and closes the XSL-FO output and preview dialogue.

13.5 Structure

The Structure menu contains the following functions.

Menu	Description
Header/Footer	The Header/Footer setup dialogue specifies whether project file will have a header and/or footer for the page and/or for the report.
Insert repeat	Inserts repeat object.
Insert frame (page)	Inserts a frame object in the layout for Flow type or page object for Fixed type.
Move repeat or frame	Moves the position of repeat or frame (for Flow type) object.

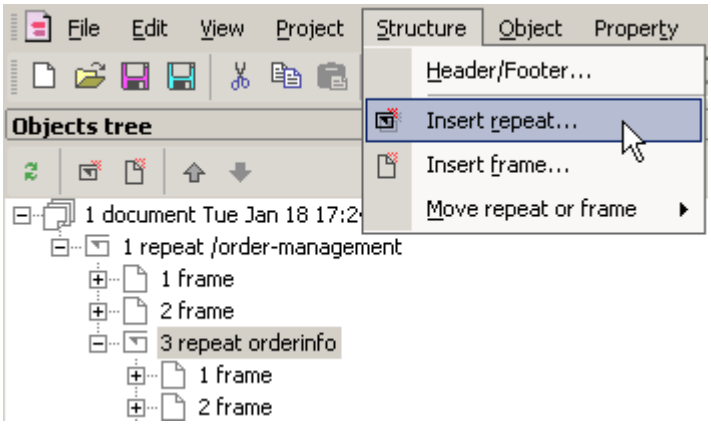
Header/Footer setup dialogue



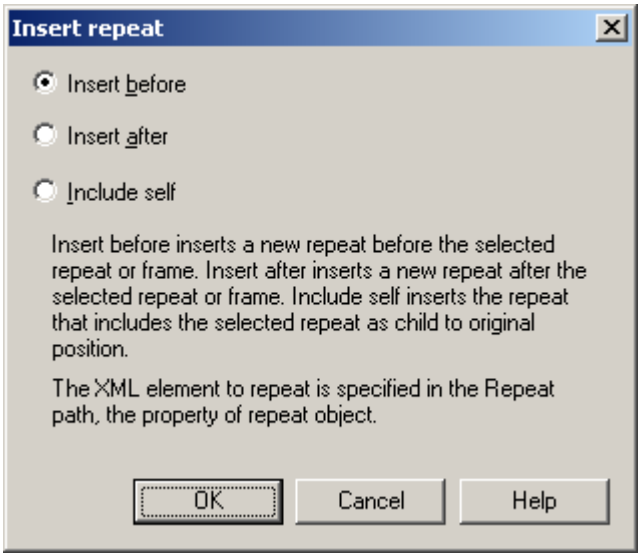
This dialogue is used to turn on or off report header, report footer, page header and page footer in the layout. If you want to delete a header or footer, display this dialogue and remove the checkmark.

Insert repeat

Flow type layouts can have multiple repeat objects under the main repeat. Repeat objects can only be inserted in a position that is subordinate to the main repeat or frame object. It can be before or after other repeat objects. From the Objects tree window choose the object where you want to insert the repeat. Then choose insert repeat. Fixed type and Label type layouts can only have a main repeat object, thus the insertion of repeat object is grayed out and not available.



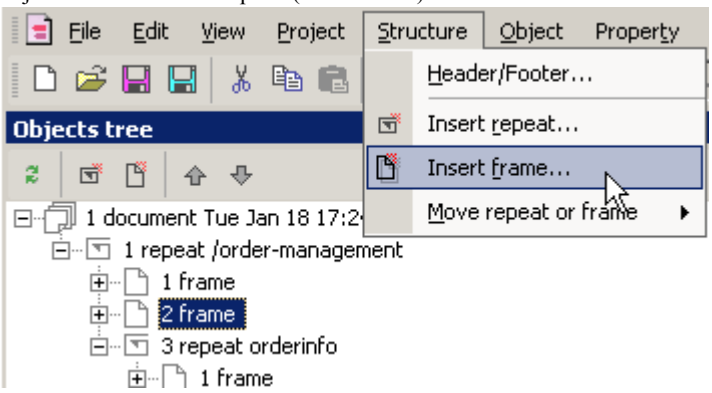
"Insert before" inserts a new repeat before the selected repeat or frame. "Insert after" inserts a new repeat after the selected repeat or frame. "Include self" inserts the repeat that includes the selected repeat as child to original position.



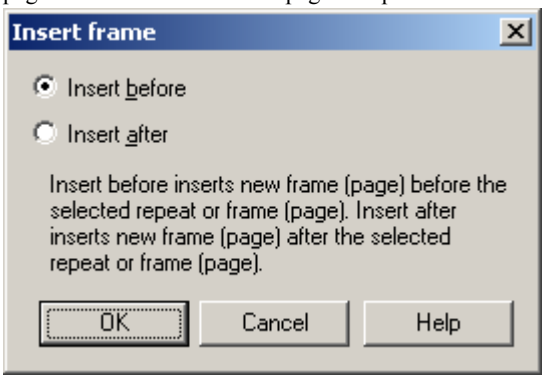
Insert frame (page)

When the layout type is Fixed a new page object can be inserted before or after the existing page object. (Insert page) The position where the repeat object can be inserted can only be subordinate to the main repeat. Select the object subordinate to the main repeat from the object tree and then insert page.

When the layout type is Flow type a new frame object can be inserted before or after an exsiting frame or repeat object other than main repeat. (Insert frame)



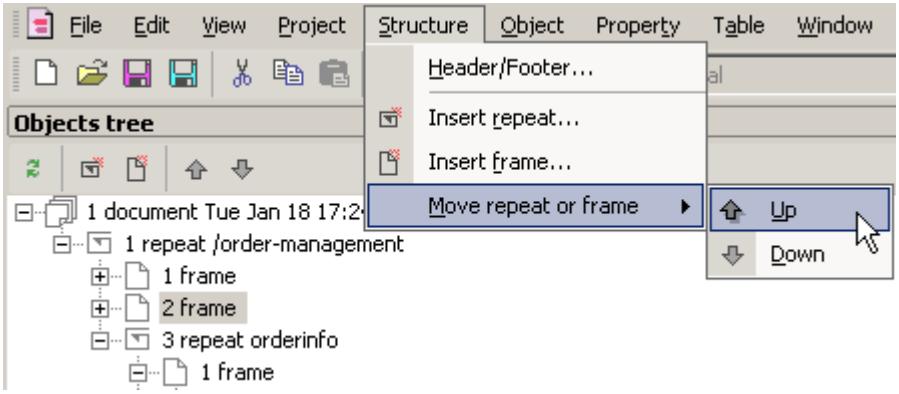
"Insert before" inserts a new page/frame before the selected page or repeat or frame. "Insert after" inserts a new page/frame after the selected page or repeat or frame.



This function is not available for Label type.

Move repeat or frame

The position of the repeat or frame (for Flow type) can be moved. (Move repeat or frame) "Up" moves the selected repeat or frame to the front of the previous repeat or frame. "Down" moves the selected repeat or frame below the repeat or frame behind.



13.6 Object

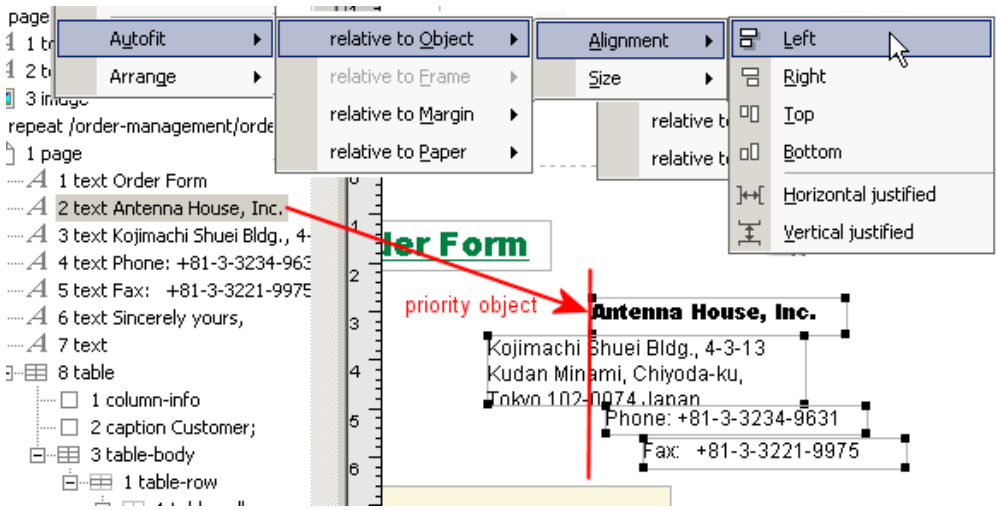
The Object menu contains the following functions.

Menu	Description
Select	The object is selected. When checked multiple objects are selected by dragging of the mouse on the layout pane while holding down the left mouse button. Individual items are selected by clicking on them.
New text	New text object is drawn by dragging the mouse on the layout pane when this menu item is checked.
New image	New image object is drawn by dragging the mouse on the layout pane when this menu item is checked.
New barcode	New barcode object is drawn by dragging the mouse on the layout pane when this menu item is checked.
New table	New table object is drawn by dragging the mouse on the layout pane when this menu item is checked. After creating the table object the Table setup dialogue is displayed. The final positon of the new table object is determined by moving the table with the mouse after the Table setup is completed.
New line	New line object is drawn by dragging the mouse on the layout pane when this menu item is checked.
Autofit	Multiple objects can autofit (align and size) at a specified position relative to either a priority object (the last object selected), the frame, the margin or the paper. In "relative to Object" the object size can be specified as the same size as the priority object.
Arrange	Controls the arrangement of the object front or back. In the Flow type layout arrangement only effects objects within the same frame. "Front" brings the selected object forward and "Back" sends it backwards.
Group	Combines multiple objects into a group so that the objects are treated as a single unit.

Ungroup	Returns the entire object to a correction of multiple objects.

Autofit

Multiple objects can be arranged at a specified position relative to a priority object, the frame, the margin or the paper. In "relative to Object," the object size can be specified as the same size, "width"/"height"/"both" as the priority object.



Objects are arranged in the position specified.

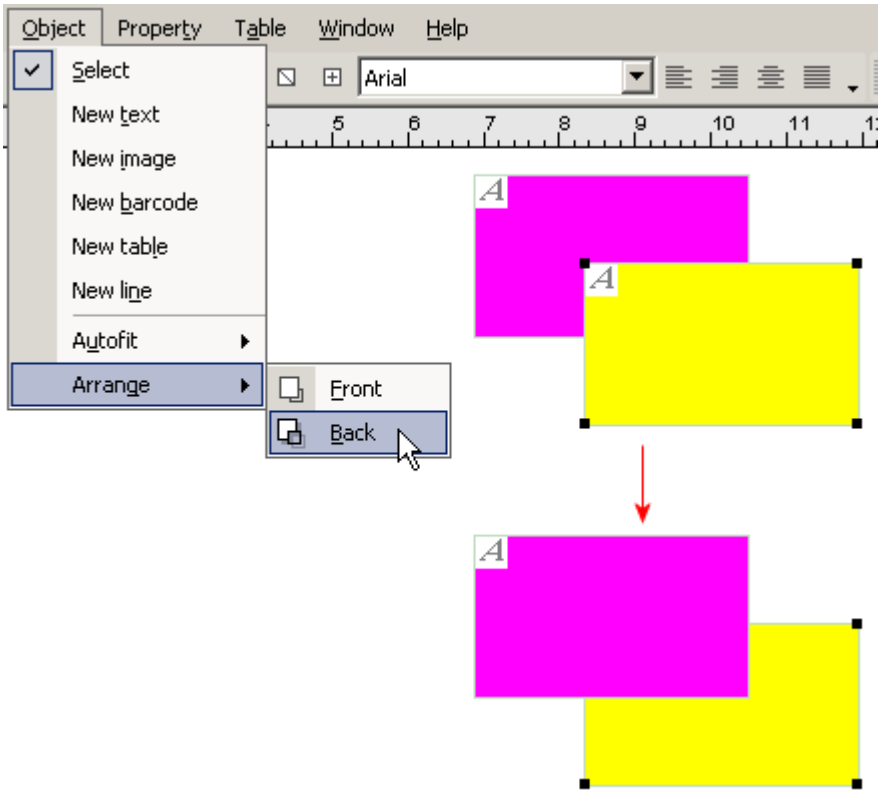
Select multiple objects and specify if they are to be relative to object, frame, margin or paper and then select the position.

relative to Object	Alignment	Left/Right/Top/Bottom	Arranges objects to the left/right/top/ bottom on the basis of the priority object.
		Horizontal justified/Vertical justified	Distributes selected objects in horizontal/vertical justified.
	Size	Width/Height	Arranges the width/height of selected objects.
		Both	Arranges the size, both of width and height, of selected objects.
relative to Frame		Left/Right/Top/Bottom	Arranges at the left/right/top/bottom edge of the frame.
		Horizontal centered/Vertical centered	Arranges horizontal/vertical centered in the frame.

relative to Margin	Left/Right/Top/Bottom	Arranges at the left/right/top/bottom margin position.
	Horizontal centered/Vertical centered	Arranges horizontal/vertical centerd in the margin.
relative to Paper	Left/Right/Top/Bottom	Arranges at the left/right/top/bottom edge of the paper.
	Horizontal centered/Vertical centered	Arranges at horizontal/vertical centered on the paper.

Arrange

Controls the arrangement of the object front or back. In the Flow type layout arrangement only effects objects within the same frame. "Front" brings the selected object forward and "Back" sends it backwards.



13.7 Property

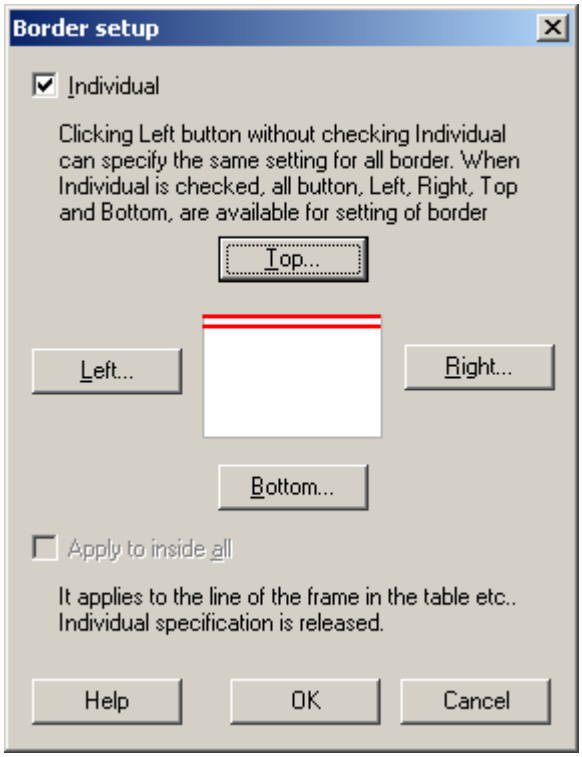
The Property menu contains the following functions.

Menu	Description
Kind	The kind of data can be either "Field" or "Static." When "Field" is selected for text, image and barcode objects the data from the specified XML path will be embedded.
Border	The border of frame around an object is set through the Border setup dialogue.

XML path	Sets which element of XML data is embedded in the object that has a property kind of "Field."
Expression	Opens the Expression dialogue which then guides you through setting expressions that can insert information such as page number and date, perform simple and complex calculations, return values and manipulate data.
Font	Opens the Font dialogue for selecting the Font, style, size and effects.
Text color	Opens the Text color dialogue for setting text color.
Background color	Opens the Background color dialogue for setting the background color. The rectangular area of an object is filled with the selected background color.
Horizontal align	Used to set how the content is arranged horizontally in the rectangular area of the object.
Vertical align	Used to set how the content is arranged vertically in a rectangular area of the object.
Image	Used to set how an image is treated within the rectangular area of an object. Also used to set the path of the image file.
Rough image	Provides the ability to open a non XSL Report Designer image of a form in the layout pane to then be used as a rough image on which to layout objects. The Rough image dialogue lets you set the path to the image file.
Property group	A property group is a named collection of object properties. With a property group in a property expression, you can change multiple properties at once dynamically. You can edit property group with Property group dialogue and Edit property groupdialogue.

Border setup dialogue

Used to set the border around a frame or object.

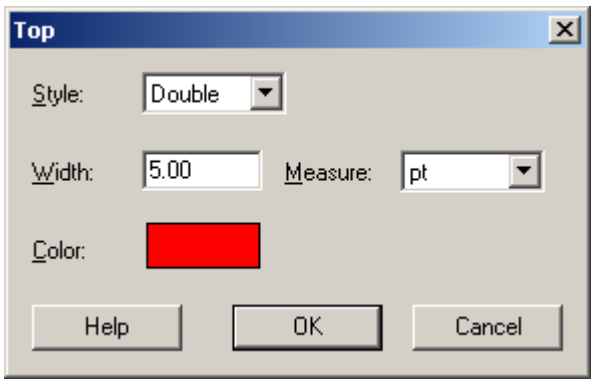


- Individual
  By clicking "Left" without checking Individual you can specify the same setting for all borders. When Individual is checked all button, "Left," "Right," "Top" and "Bottom" are available for setting the borders individually.

- Apply to inside all
  Used for table object. When checked borders/rules are drawn around all table cells, including the header and footer. The Left button is used to set the rule properties.

Border dialogue

By clicking the "Left," "Right," "Top" or "Bottom" button the following dialogue is opened.

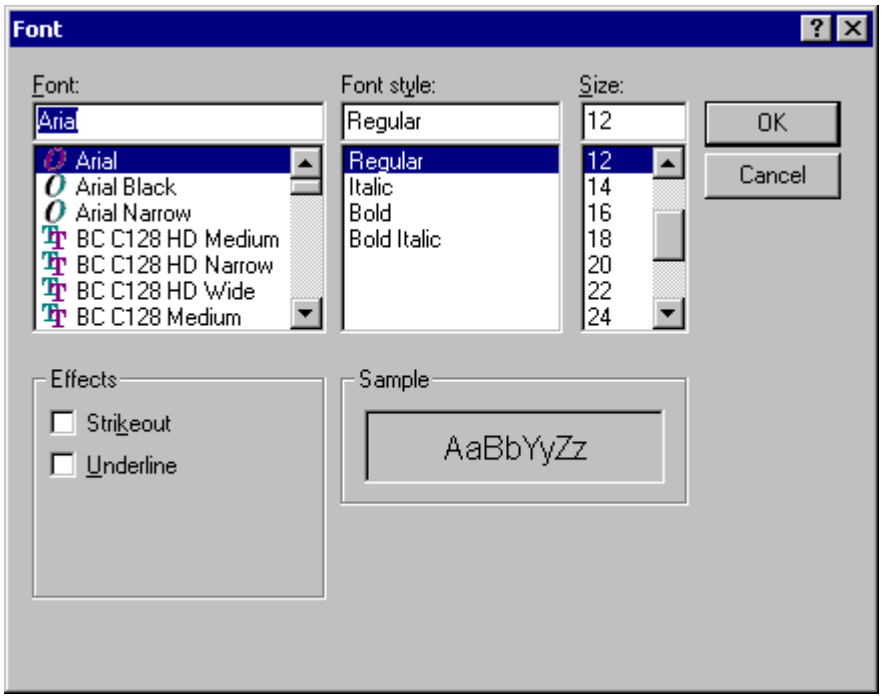


- Style
  Select the style of the border from "None," "Dotted," "Dashed," "Solid," "Double," "Groove," "Ridge," "Inset" and "Outset."

- Width
  Specify the width of border. The width measure can be in pt (point), mm (millimeter) and in (inch).

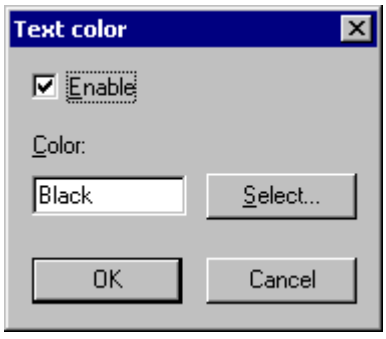
- Color
  Specify the border color.

Font dialogue



This is for selecting the Font settings.

Text color/Background color dialogue



- Enable
  When enable is checked the color can then be set or changed for the font.

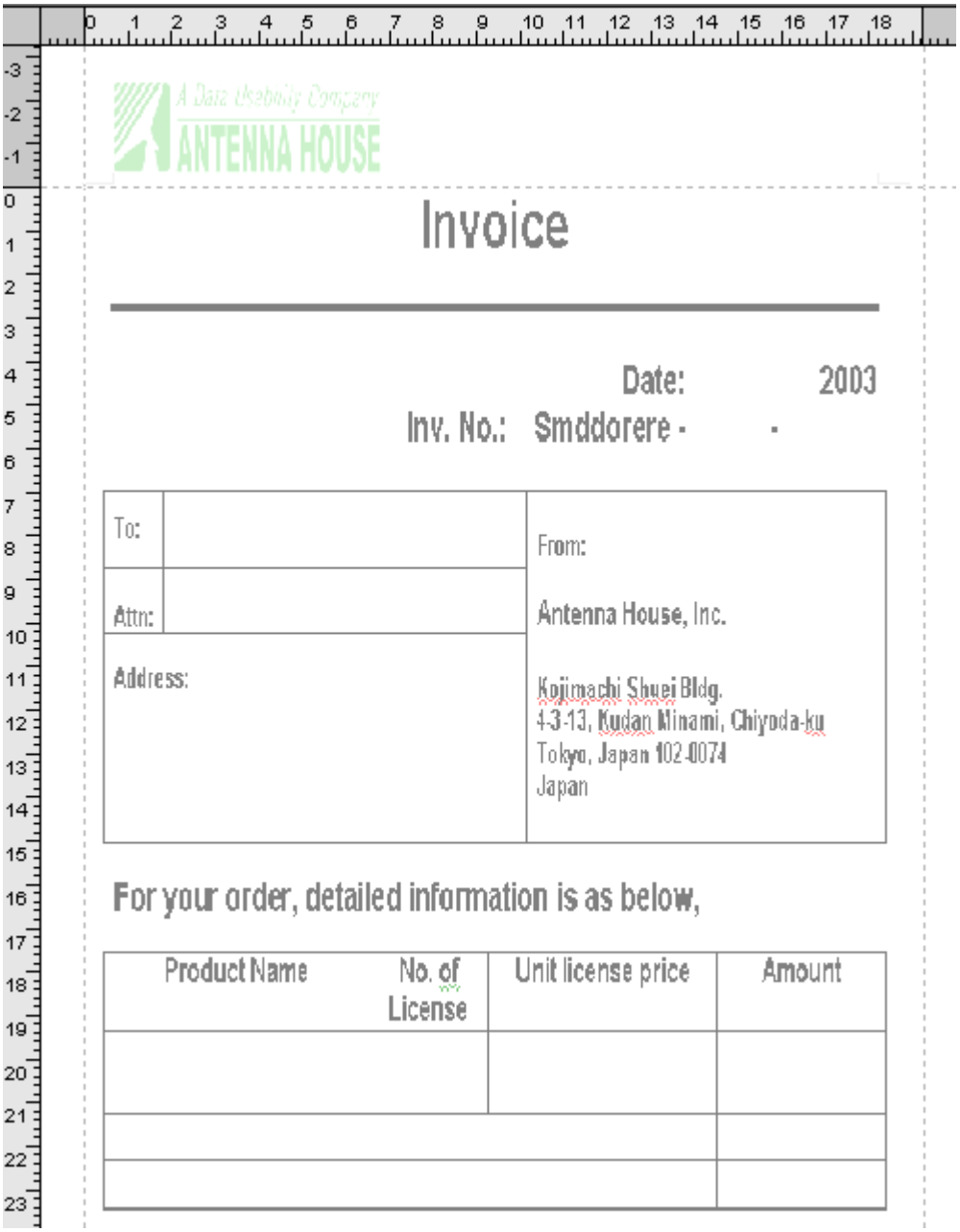
- Color
  Color names (Red, Yellow, Cyan, Magenta, Green, Blue, Black, White) or the RGB value can be input by the hexadecimal number (example # C0C0C0) in order to set a specific color.

- Select

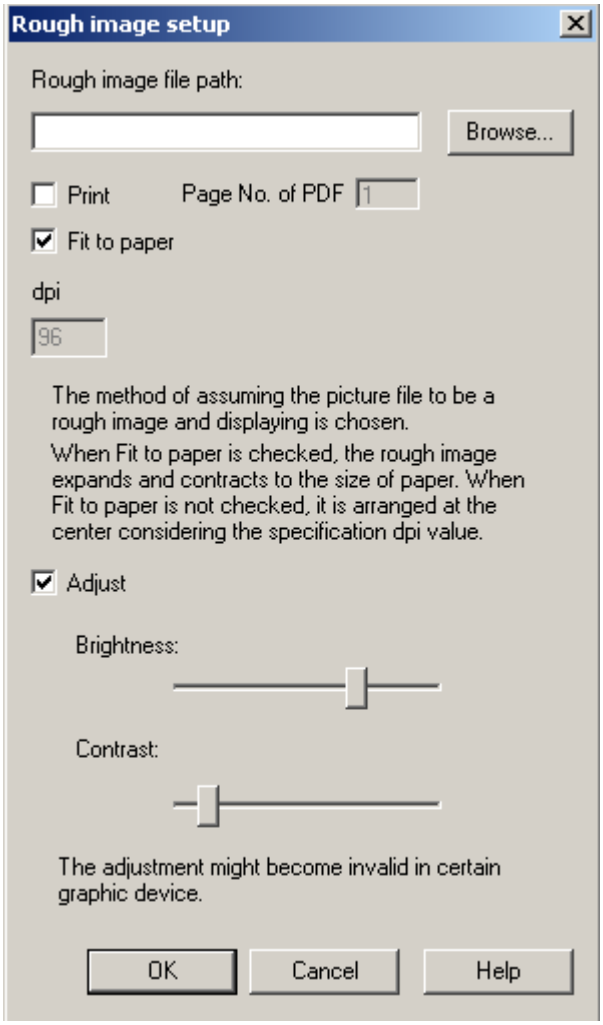
Colors can also be set by using the following dialogues:

Rough image dialogue

Provides the ability to open a non XSL Report Designer image of a form in the layout pane to then be used as a rough image on which to layout objects. The rough image setup menu lets you set the path to the image file. A rough image is specified only at the "page" object (in Fixed type) from the Objects tree window.



Rough image setup dialogue



- Rough image file path
  Specifies the image file to use as a rough image. The Browse button opens the dialogue for choosing a file.

- Print
  When it's checked, the base draft will be outputted as a background image when printing and outputting a PDF file.

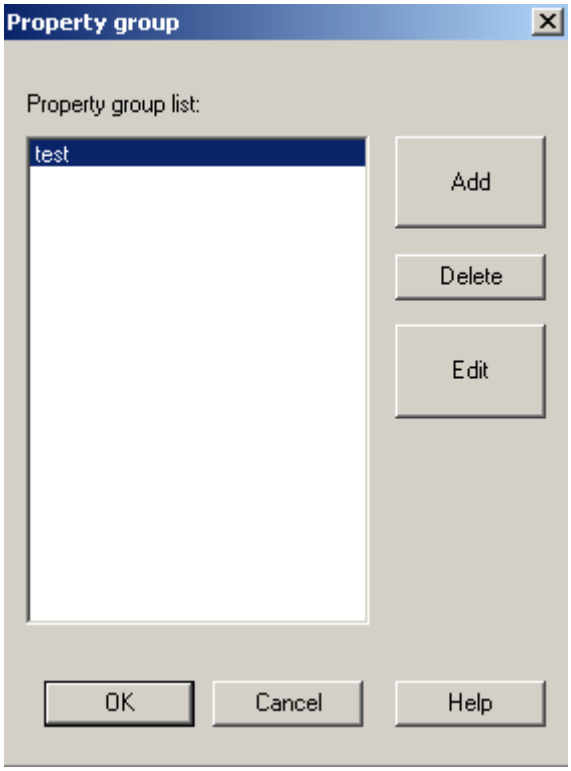
- Page number of PDF
  When PDF file is specified as an image file, the page number of PDF used for a base draft can be specified.

- Fit to paper
  When checked the diplay of the rough image expands or contracts to fit the size of paper.

- dpi
  The dpi value of the rough image file set the size of the image within the layout pane when the "Fit to paper" is not checked.

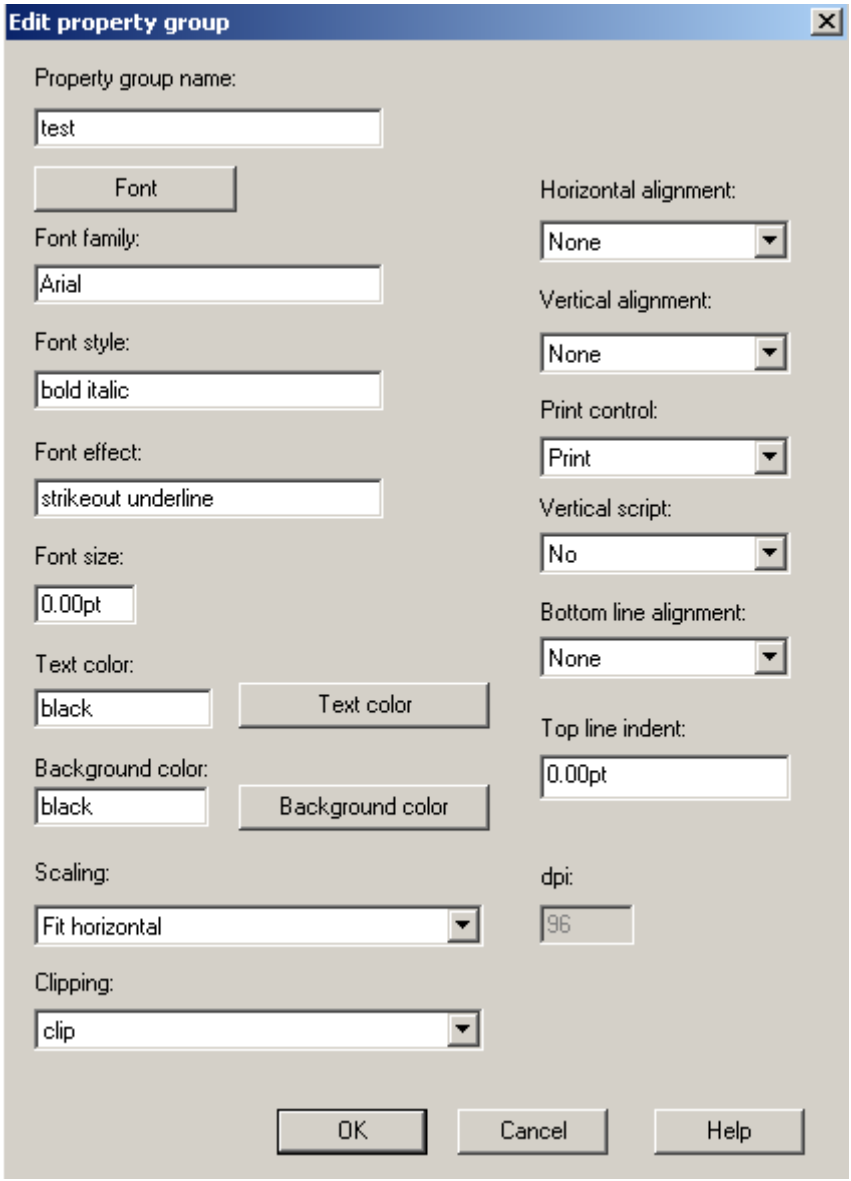
- Adjust
  When checked the "Brightness" and "Contrast" of the image can be adjusted. When not checked the rough image is displayed equivalent to the original image.

Property group dialogue



You can add a property group by clicking the Add button.
You can delete a property group by clicking the Delete button.
You can edit a property group by clicking the Edit button.

Edit property group dialogue



Please refer to "Properties list" (page 206) for more information about the properties.

13.8 Table

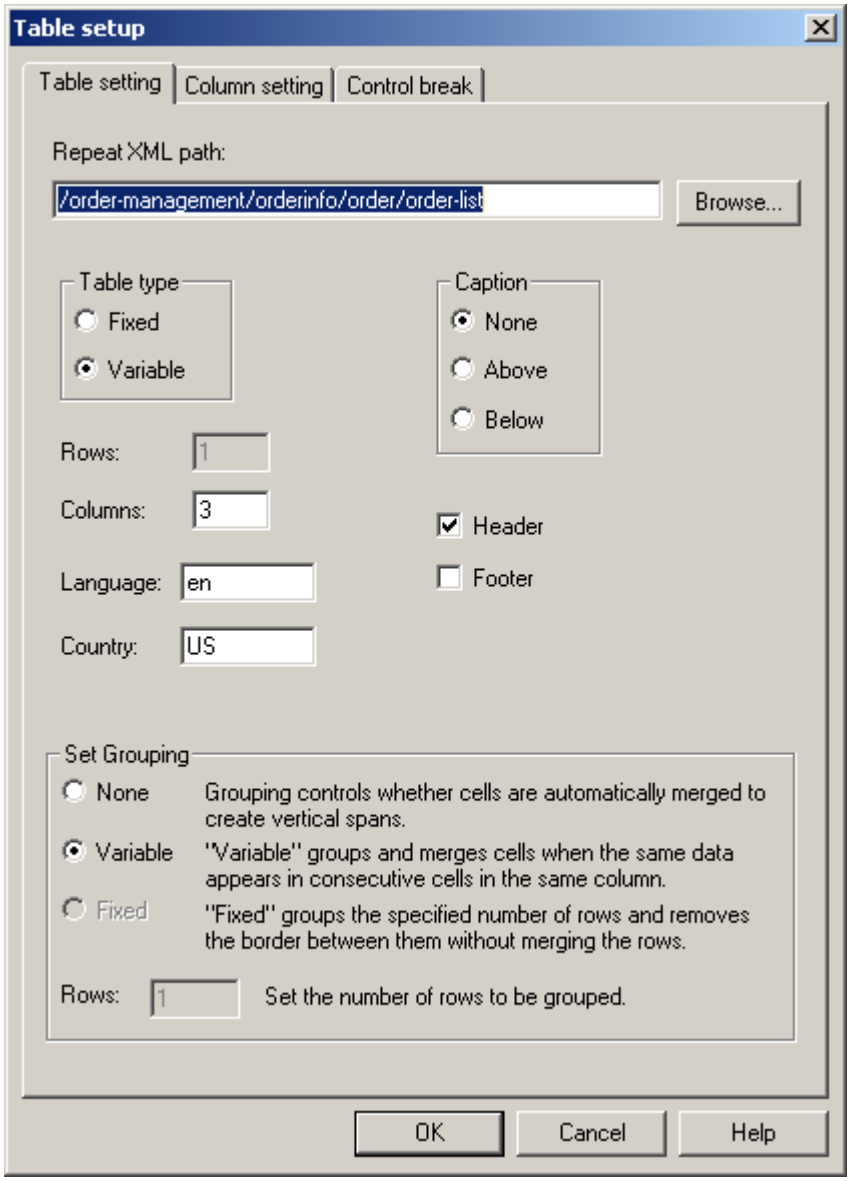
The Table menu contains the following functions.

Menu	Description
Column	For selected column(s), inserts new column right or left, cuts the column and make columns the same width with Autofit.
Row	For selected row(s), inserts new row above or below, cuts the row and makes rows the same height with Autofit.

Caption	Inserts or erases a caption on top or bottom of a selected table.
Header	Inserts or erases the header for the selected table.
Footer	Inserts or erases the footer for the selected table.
Setting	Opens the Table setup dialogue for changing table properties.
Merge Cells	Merges two or more adjacent cells into a single cell and display the contents of a sinble cell.
Unmerge Cells	Separates a merged cell into the original number of cells.

Table setup dialogue

Table setting tab



- Repeat XML path
  Where the XML path to the element repeated in the table is specified. The Browse button opens the dialogue for XML path.

- Table type
  In a "Fixed" table the number of rows do not change according to the amount of data. In a "Variable" table the table expands to accommodate the number of rows in the XML data.

- Caption
  Specifies whether the table will have a caption and if the caption is above or below the table.

- Rows
  For fixed table specifies the number of rows.

- Columns
  Specifies the number of columns in the table.

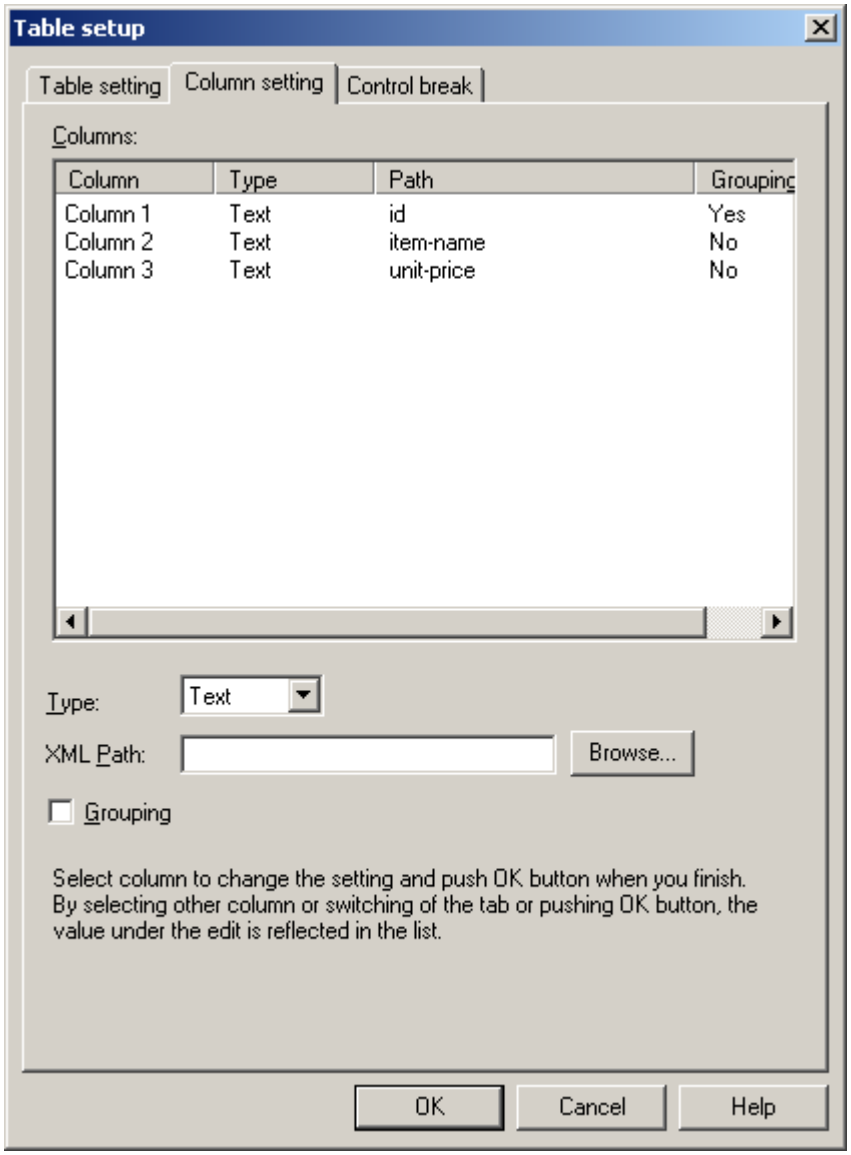
- Language
  Specifies the Language used in the table. When formatting the table the set language controls how the data is formatted for totals, subtotals, sub-subtotals, etc. Conforms to "language codes" defined in ISO 639.

- Country
  When formatting the table the Country information controls how the data is formatted for totals, subtotals, sub-subtotals, etc. Conforms to "country codes" defined in ISO 639.

- Header / Footer
  Sets Whether to put a header/footer for the table.

- Set Grouping
  Grouping controls whether table cells and rows are automatically merged to create vertical spans in the table object. "None" does not group cells. "Variable" groups and merges cells when the same data appears in consecutive cells in the same column. "Fixed" groups the specified number of rows and removes the border between them without merging the rows. The Group specification takes effect only when the Break in Contorl break tab is not set.

Column setting tab

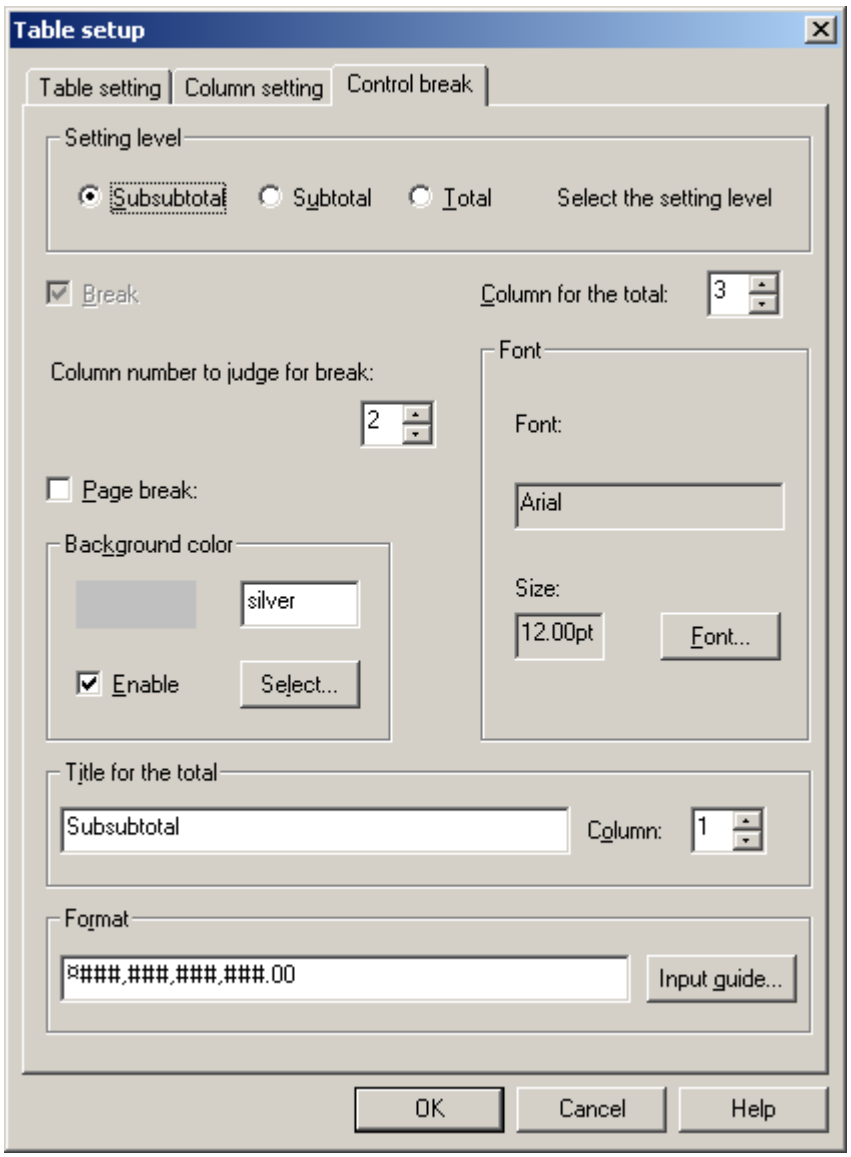


In the Column setting tab, the object type (Type) and the XML path (path) for each column are specified. (Column type) Select the column in Columns list, and then select the type of object from the Type combo box. Specify the XML path in the XML Path box. Specify the relative path from "Repeat XML path" of the table as the XML path here.

- Columns
  Lists each column of the table.
- Type
  Object type for the selected column.
- XML Path
  The XML path to the element repeated in the column is specified by the relative path from "Repeat XML path" of the table. The Ref button opens the tree view of XML path specified by "Repeat XML path."
- Grouping

Specifies whether Grouping of each column is set. The check box is available only when the "Set Grouping" property is specified for "Variable" or "Fixed" in the Table setting tab. In addition to the "Set Grouping" in the Table setting tab gouping for each column has to be set here for grouping to take effect.

Control break tab



Control break is a function that totals the content of cells by the specified "Column number to judge as break." Because the total result is output to a row that does not originally exist, the Set Grouping property specified by "Fixed" is not available for this function.

- Setting level
  Select the level of "Subsubtotal," "Subtotal" and "Total" to set each setting for control break.

- Break
  Break judges the specified columns, and outputs the total of the value of the columns. The total result is output to the specified column of the row for the total result of the automatic insertion. Break can be specified for each setting level. Total result is output to the columun that is specified by "Column for the total." Input the column number here. (This is property for the table.) Specify the column number in

"Column number to judge for break" so that the specified column becomes the break key. When the value (content) of the column specified here has changed, the break processing is done.

- Background color
  Sets the background color for the total results row.

- Font
  Sets the font for the total results row.

- Title for the total
  Specifies the title that is output to the total results row. Which column the title is placed in is specified in "Column."

- Format
  The numeric format of the total result row.

13.9 Window

The Window menu contains the following functions.

Menu	Description
Cascade	Cascades the layout pane of all open projects in the center of the screen.
Tile	Tiles the layout pane of all open projects in the center of the screen.
Arrange	Clicking arrange while viewing a project and then shrinking the project with the minimize icon will exclude that project from tile and cascade till the project is viewed again with Restore Up or Maximize. The project icons are lined up at the bottom of the window.

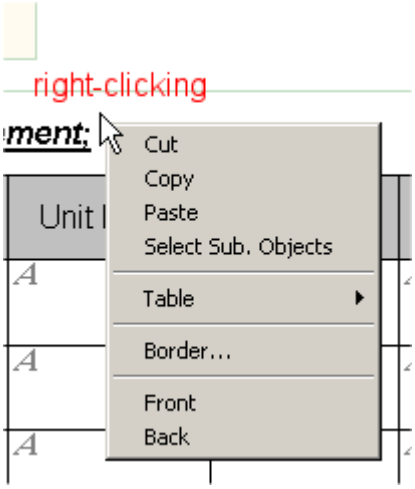
13.10 Help

The Help menu contains the following functions.

Menu	Description
XSL Report Designer Help	Displays the Help for XSL Report Designer.
Antenna House Web Site	Displays the Antenna House Web Site.
About XSL Report Designer	Displays the version and copyright information for the program.

14 Context menu

The context menu is a pop-up menu displayed when the mouse's right button is clicked in the layout area. It provides shortcuts to the most used items in the main XSL Report Designer menues.



The context menu selections change according to the status at the time the right mouse buttom is clicked. All these items exist in the main context menu. For details about the individual menu items refer to the main menu.

The context menu contains the following commands:

- Cut
- Copy
- Paste
- Select Sub. objects
- Table
- Border
- Front (Arrange)
- Back (Arrange)

15 Docking window

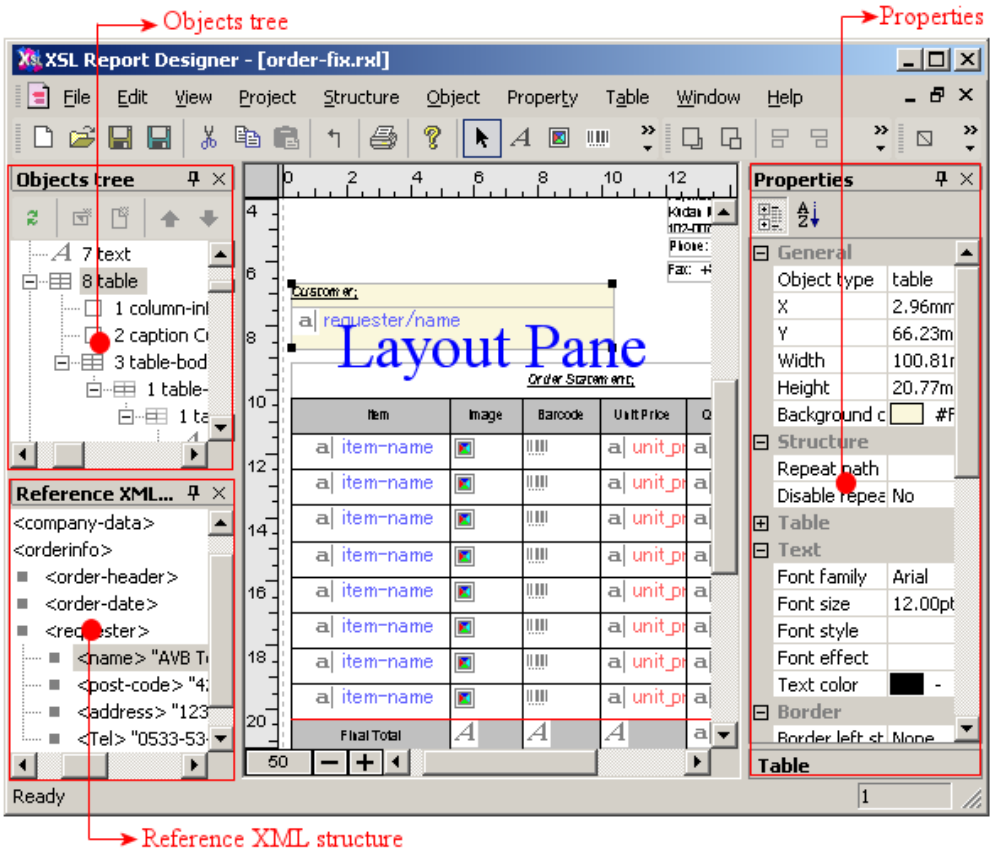
As the default XSL Report Designer displays three docking windows (Objects tree, Reference XML structure, and Properties) surrounding the layout Pane which is the window for editing and design of the document layout.

By using the mouse you can freely move and change the size of each window in order to display information on the screen as you want to see it.

The following section explains the method of setting the docking windows to either display or not display and how to change their position and size.

15.1 Reset to the default setting

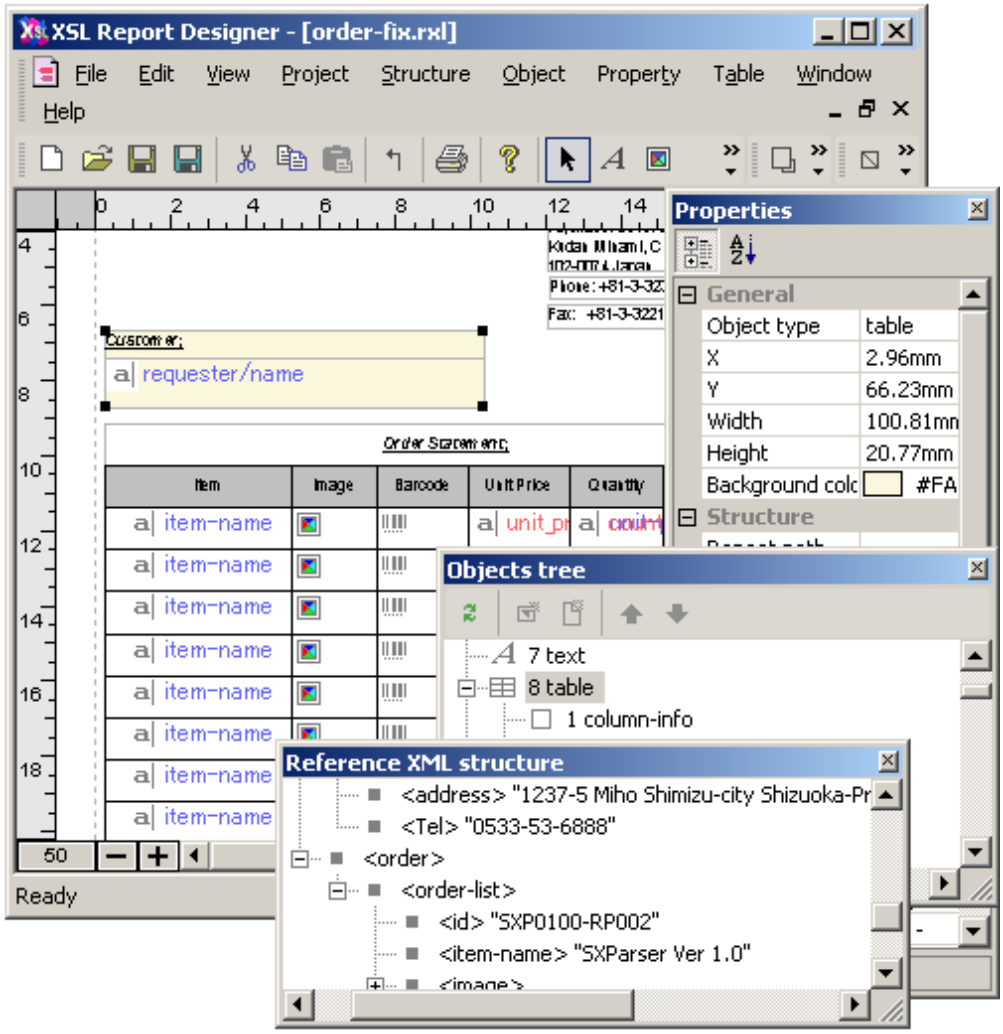
The following is how the default settings for the docking windows looks.



To return you display to the default settings restart XSL Report Designer without a checkmark in the "Preserve window layout" in the Misc tab in the Preferences dialogue. Returning to default is very useful if while manipulating the docking windows you somehow loose control of them.

15.2 Floating window mode

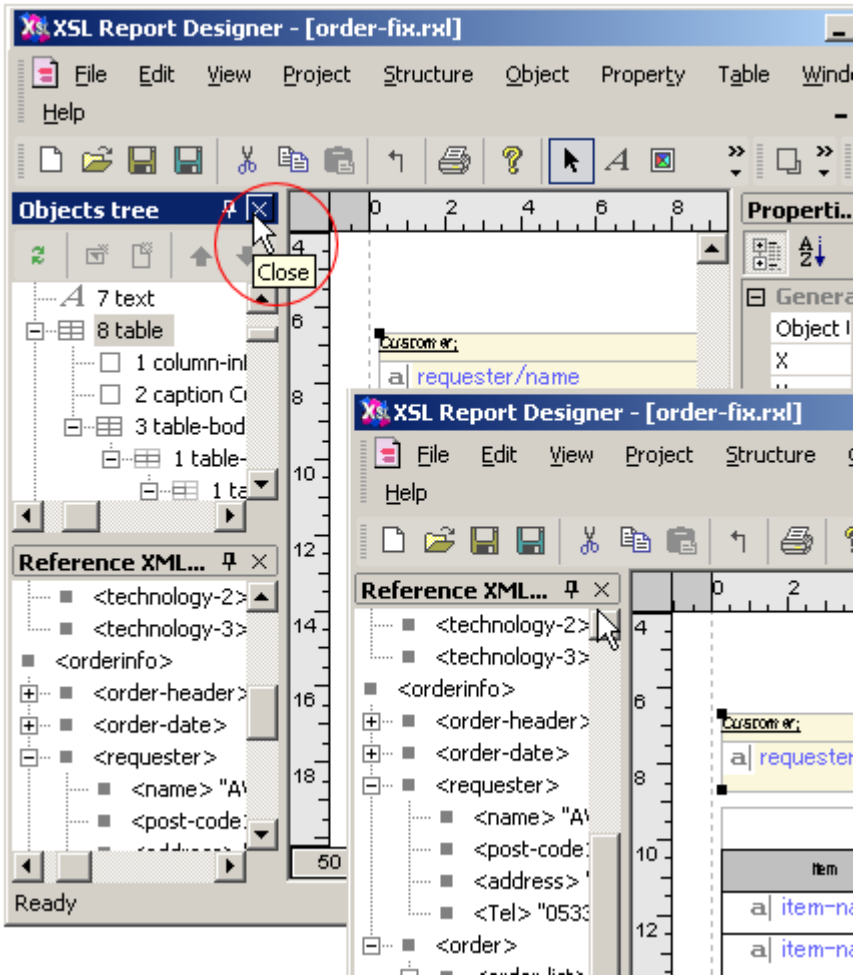
In floating mode, a window has a thin title bar and can appear anywhere on the screen. A floating window is always on top of all other windows. To make a docking window a floating window, click twice on the window's title bar. Click twice on the floating window title bar to redock the window.



15.3 To show or hide a docking window

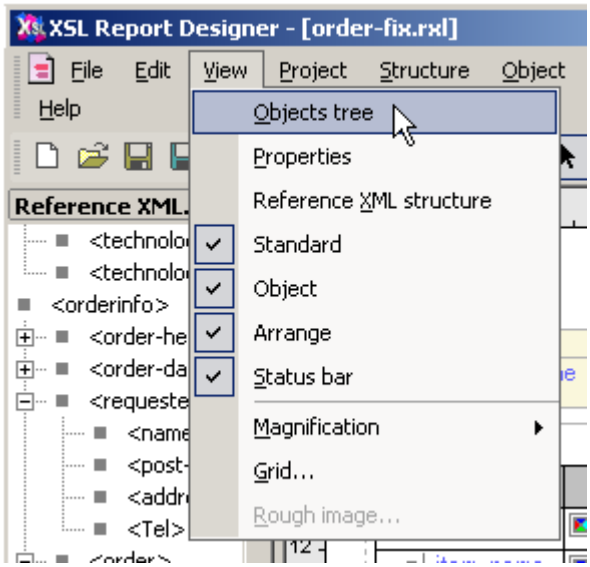
To hide the window

To hide a docking window click the  button in the window's title bar.



To show the window

To show a docking window click the name of the window on the View menu.



15.4 Layout of windows

The following operations can be freely done by using the mouse on the docking window so that you can arrange them according to your preferences.

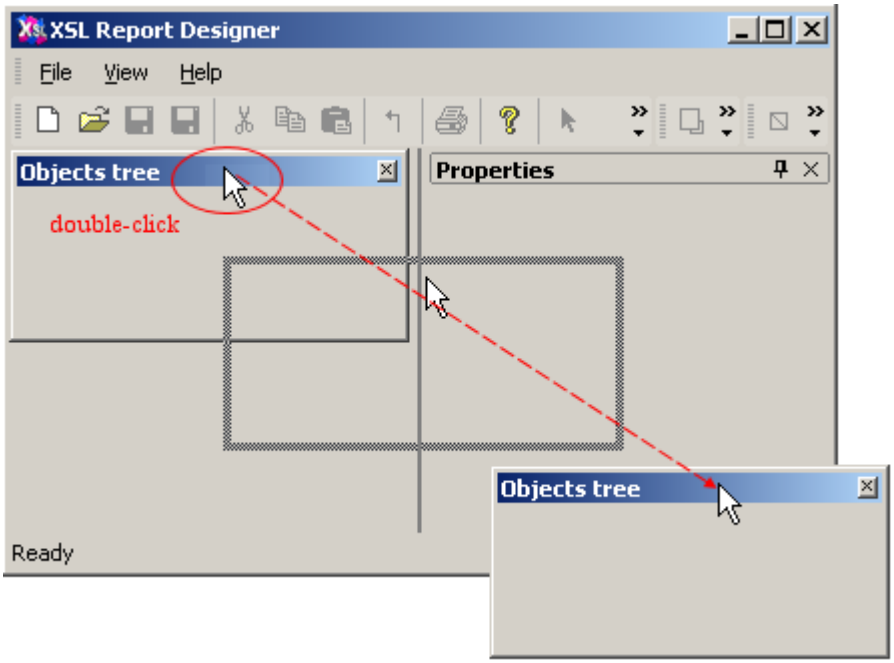
- Change to a floating window
- Change the size and the layout
- Dock with other window
- Hide window automatically

The following is an example to show how easily the docking windows can be moved.

Change to a floating window

To change a docked window to a floating window, double-click in the title bar of window. You can move the floating window freely by dragging it with the mouse.

To return the window to its previous docked location, double-click the window title bar.

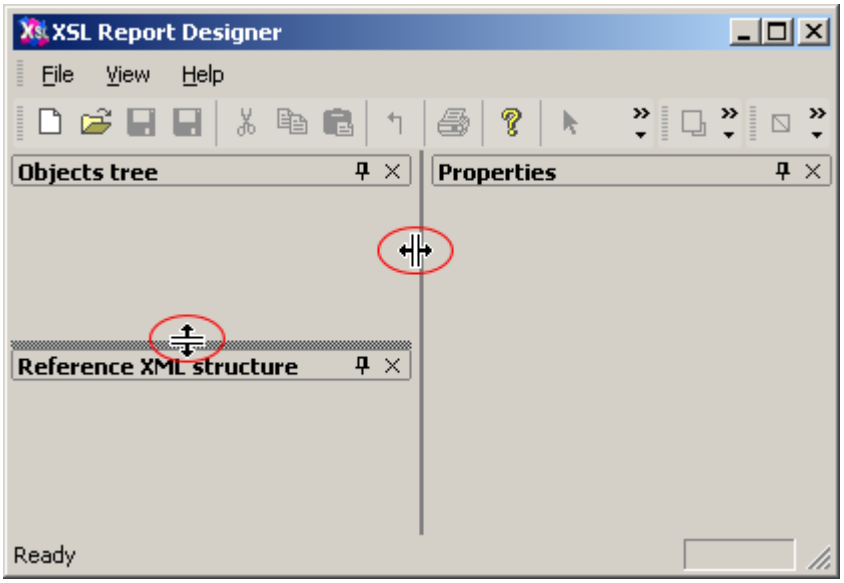


As floating windows are dragged around the window they will automatically try and dock as they pass over docking areas. To position a floating window over a dock (without docking it) hold down the [Ctrl] key and drag the window over any dock area of the application window.

Change the size and the layout

Change the size

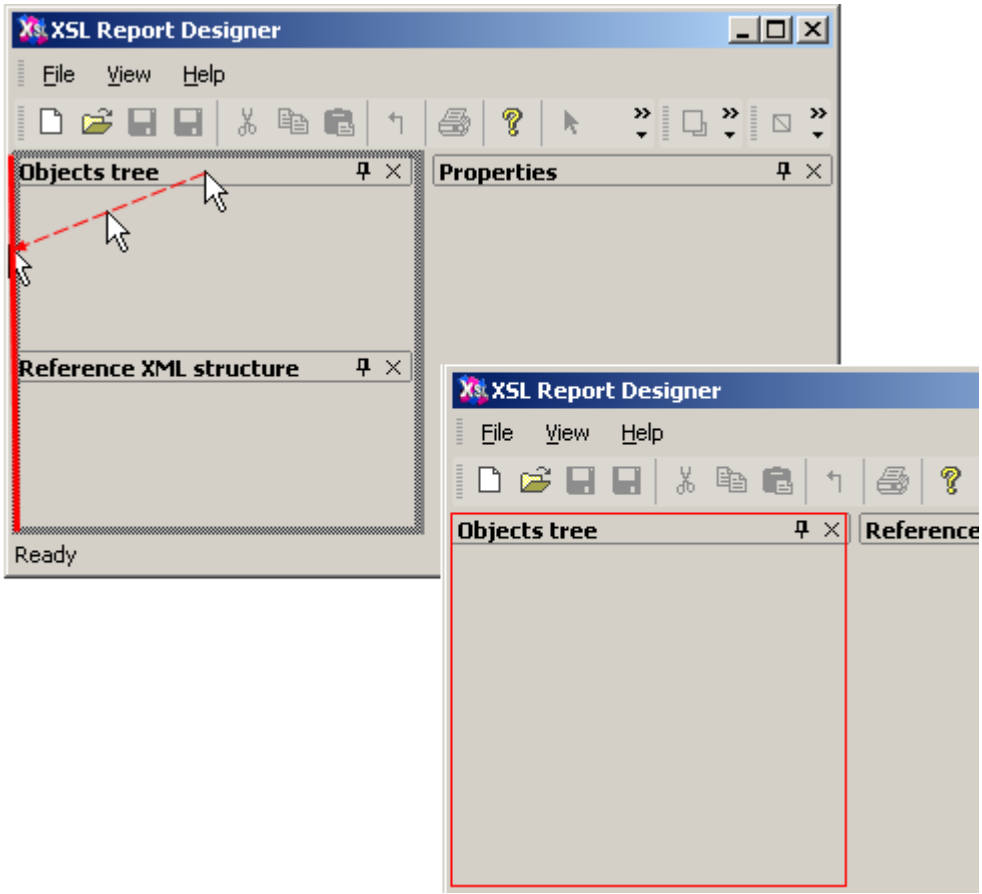
The size of window can be freely expanded and contracted by dragging the borderline.



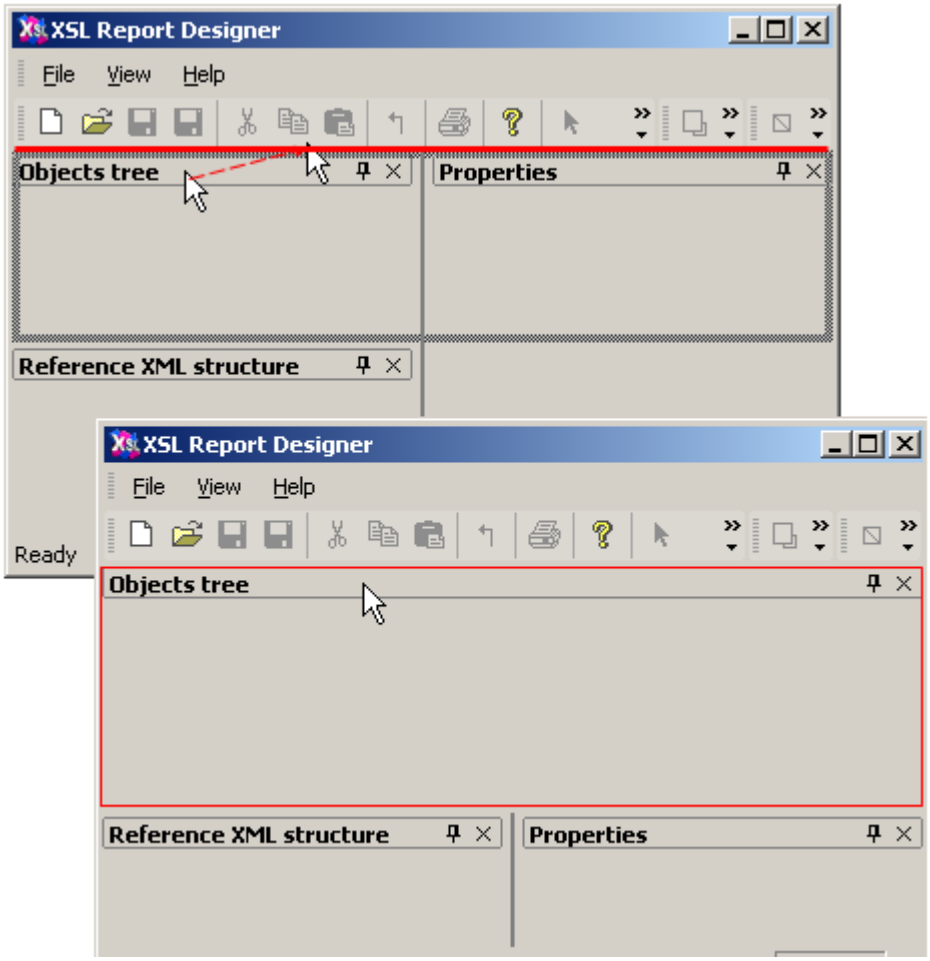
Change the layout

To change the layout of the windows hold the mouse button down in the title bar of the window you want to move and drag the window to the desired position, As the window is being dragged around the screen outlines will appear to show how the window positions at that point in the display.

For example, to make the Objects tree window displayed along the left edge of the screen drag the Objects tree window to the left edge border of XSL Report Designer.



To display the Object tree at the top, drag it to the top border.

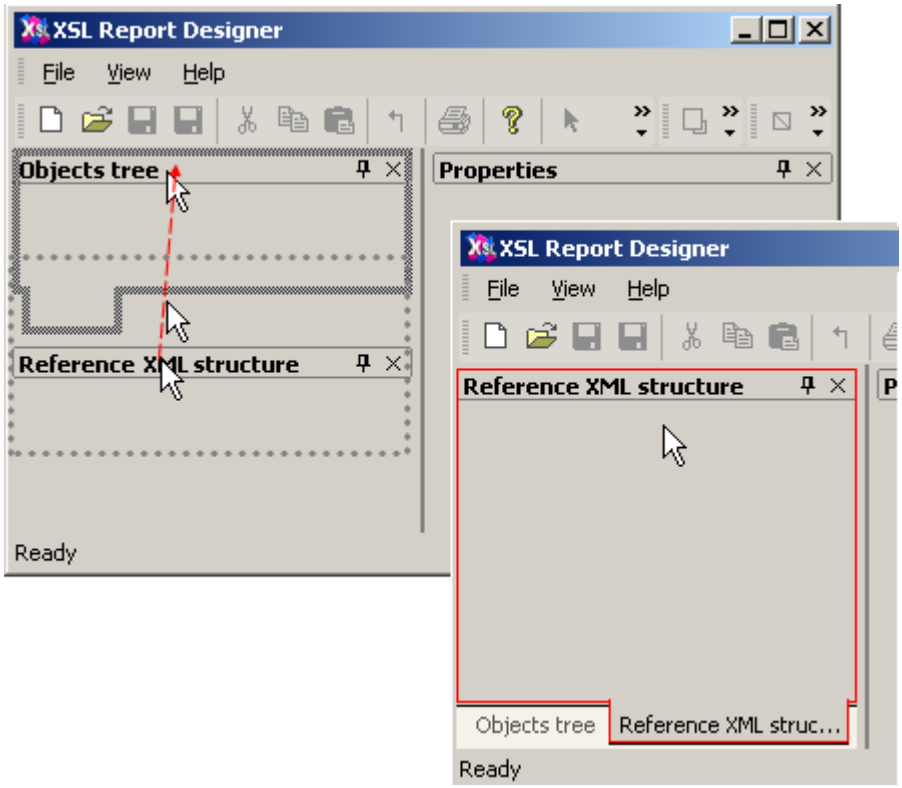


Tip

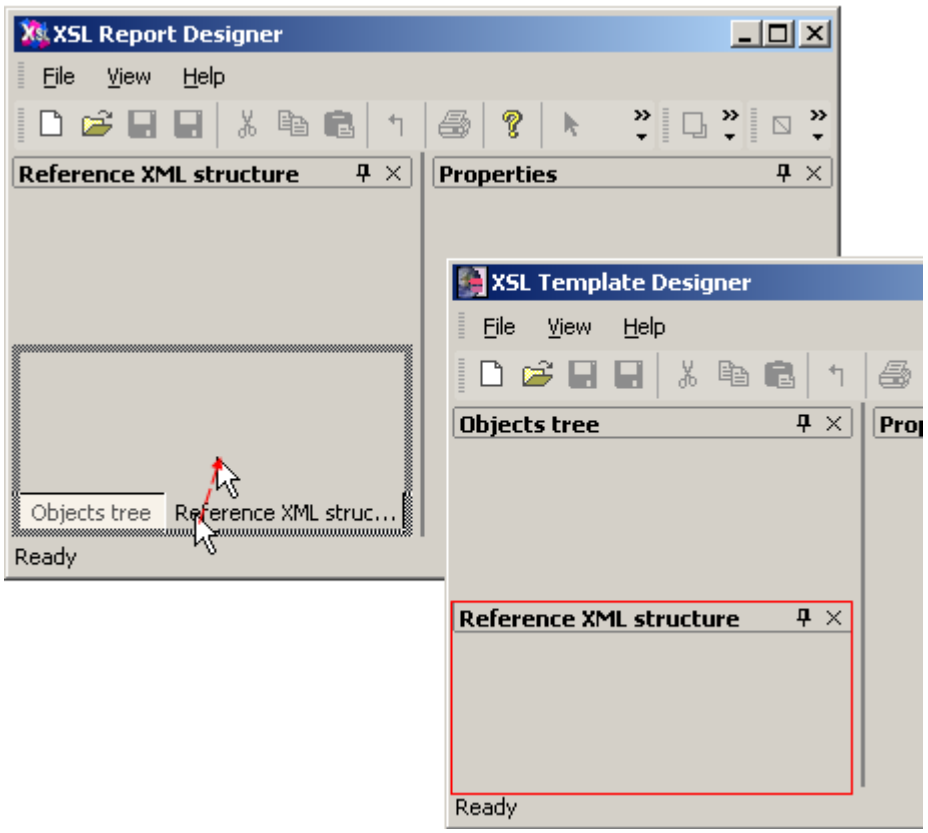
- To position a docking window over a dock (without docking it), hold down the [Ctrl] key and drag the window over any dock area of the application window. The window now becomes a floating window.
- The position of a floating window is decided by where you moved it with the mouse and not by the docking positions around the edge of the window.

Dock on top of other docking windows

Docking windows can be stacked one on top the other by dragging the title bar of one docking window on top the title bar of the other docking window. When docking windows are stacked a tab is displayed at the bottom of the windows. Clicking on a tab selects that window.



To separate the stacked windows double-click or drag the tab of the window you want to separate.

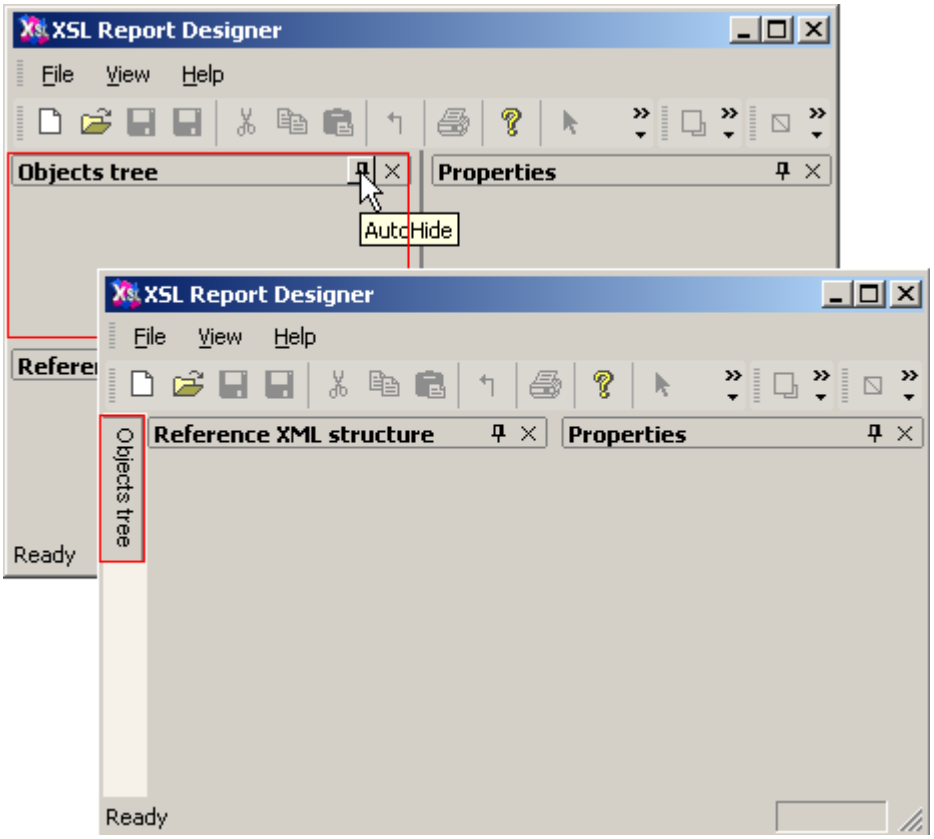


Auto hiding windows

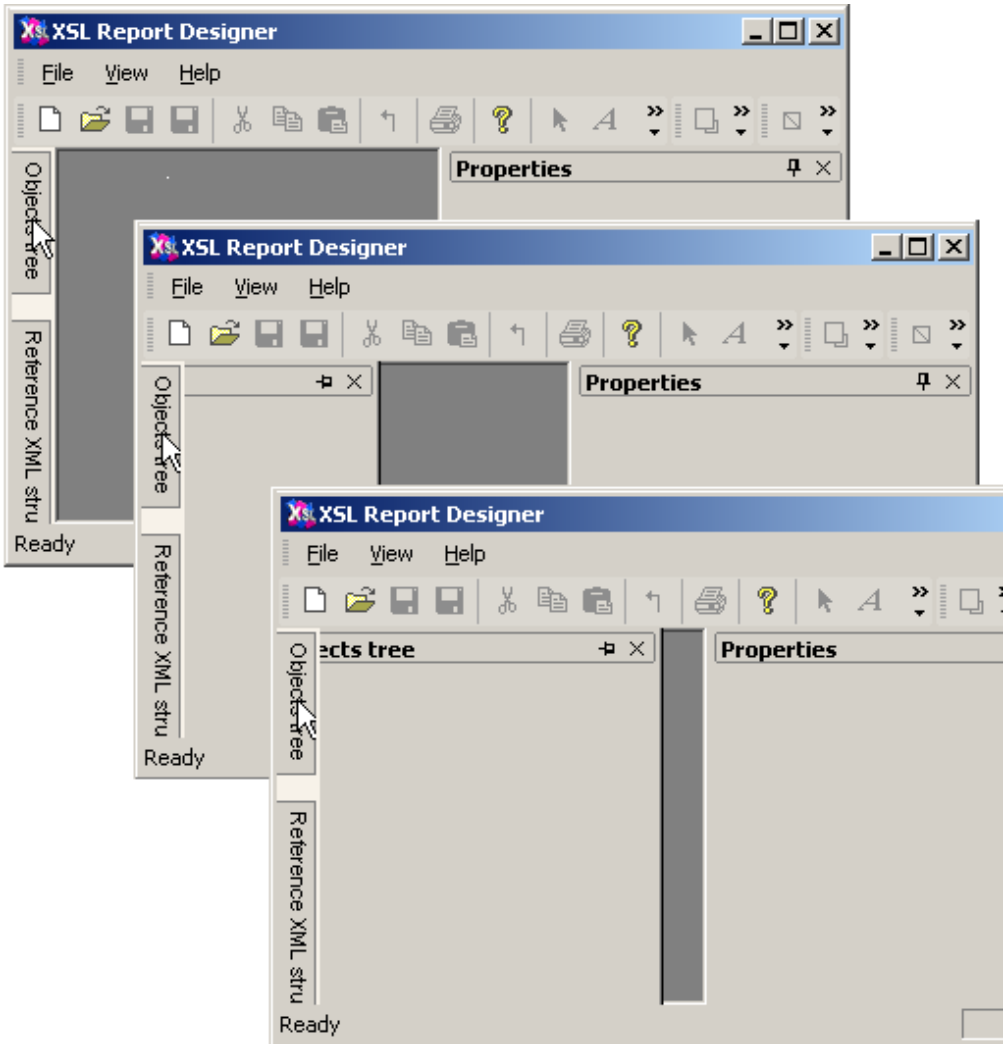
All docking windows support auto hiding by using the pin on the title bar. When the pin is released by clicking on it the window is minimized to a tab on the left or right margin. When the cursor is put over the tab the window opens. When the cursor is put somewhere else on the display the window auto hides.

To set auto hide

To make a window auto hide click the push pin icon  in the title bar of the window. The window is minimized to a tab.



The tab displays the windows name. To open the window place the cursor on the tab. The window opens from the tab and can then be accessed.



When the cursor focus is removed from the window it will auto hide.

To turn off auto hide for a window

Clicking the push pin icon  in the title bar of an open auto hide window will then pin the window to the display and turn off auto hide.

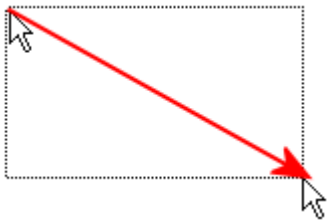
16 Using the mouse and keyboad in the layaout pane

You can edit each object of text, image, barcode, table and line by using the mouse and keyboard in the layout pane. You can select, cut, copy, paste, move, delete, resize objects, edit text in the object and insert new objects. The set values and changes are all reflected in the property settings of each object.

16.1 General

Making an object area

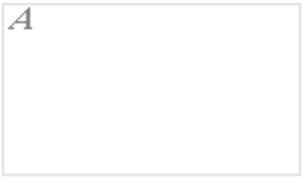
To make an object area select the type of object you want to make either from the Object menu or the tool bar. Then drag the cursor to create a rectangle on the layout pane where you want the object positioned.



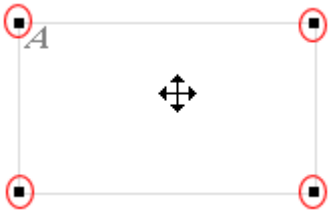
Selecting an object

To select an object click the inside the rectangular area of the object. Square marks are displayed on the four corners of the selected object.

The object has not been selected.



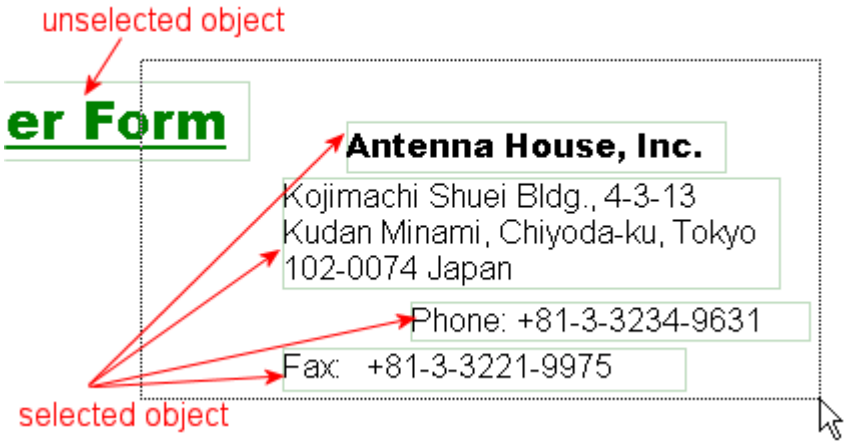
The object has been selected.



Selecting multiple objects

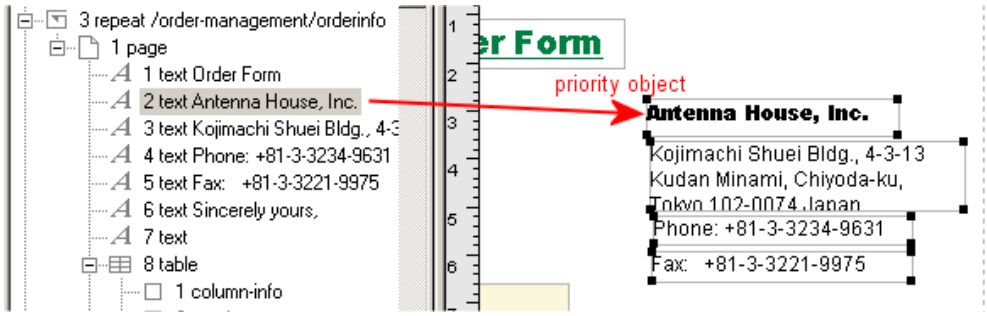
Multiple objects are selected by clicking on objects while holding the [Shift] key down.

Multiple objects can be selected in the layout pane by drawing a rectangle with the mouse completely around the objects to be selected. If an object is not completely enclosed by the rectangle it will not be selected.



Priority object

When multiple objects are selected the last object selected is the priority object. The priority object is used as the standard for "Autofit" and selected properties such as the font setting. If you want to give priority to a specific object that has already been selected, release the object and reselect it last. To release only one selected object while selecting multiple objects, click on the object while holding the [Ctrl] key.



Cutting an object

Select the object and choose Cut or Clear from the Edit menu. Or, choose Cut from the context menu which is shown by clicking the right mouse button.

Copy an object

Select the object and choose Copy from the Edit menu or the context menu which is shown by clicking the right mouse button.

Paste an object

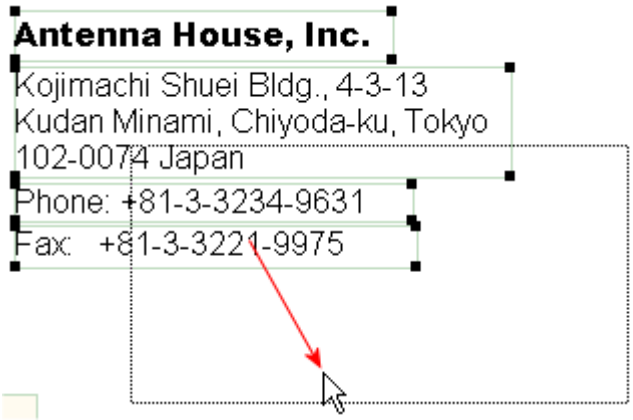
Once an object has been cut or copied it is placed on the clipboad. By choosing Paste from the Edit menu or the context menu you can then paste from the clipboard onto the layout pane.

Moving an object

The object is moved by clicking inside the object area and dragging it.

Moving multiple objects

Select the multiple objects and then click inside the selected area and drag the objects,



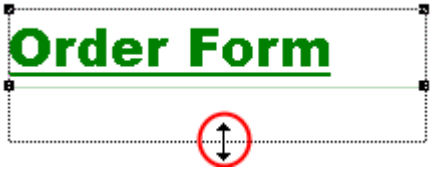
Clearing an object

Select the object and choose Clear from the Edit menu.

Change Size of an object

Select the object and then drag any of the corners to scale (change both the width and height of the object) or drag on any edge to change either the width or height of the object.

When the edge is dragged the object size is only changed in one direction, width or height.



Cancel while moving or changing size

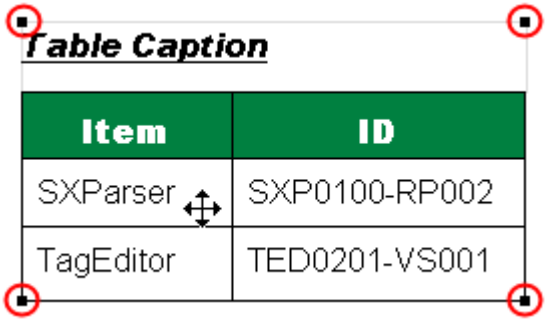
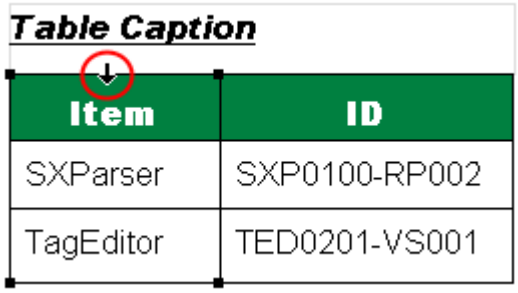
To cancel moving an object or changing the size while dragging hit the [ESC] key. This will return the object to its original positon and will restore the object to its original size.

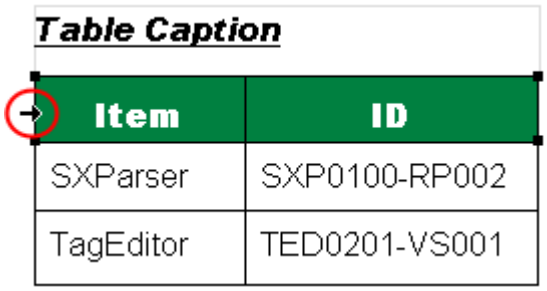
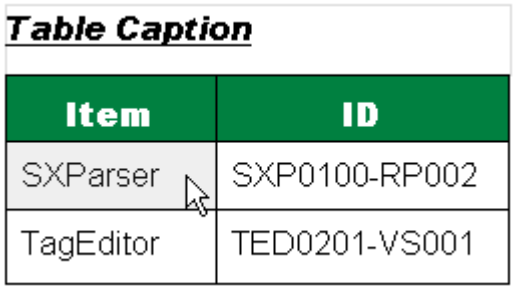
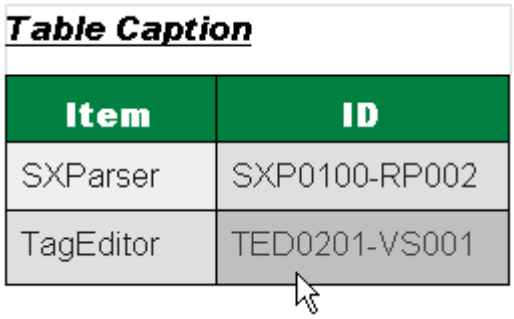
Edit a text object

Double-clicking on a text object selects the object and shifts to the edit mode. Edit mode only applies to text objects.

16.2 Tables

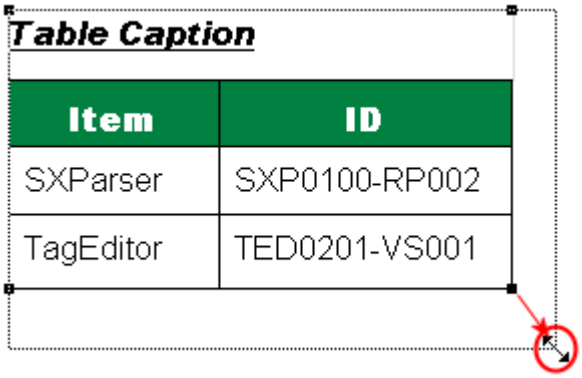
Selecting each part of a table

Table	To select part of a table click on the part with the mouse. Do not click on the lines. 
Table-body, table-header, table-footer	The body, header and footer of a table have to be selected using the object tree in the Objects tree window.
column	By clicking the top edge of a table column you can select the entire column. If the table has a caption on top you have to click at the top of the column under the caption in order to select the column.  To select multiple columns click the top edge of the columns while holding the [Shift] key.

row and caption	By clicking the left edge of the table you can select the caption or a row of the table. By holding the [Shift] key down you can select multiple rows and the caption. 
cell	To select a cell first select the table and then click on the cell. Once the cell is selected it will turn grey.  To unselect a cell click either outside the limits of the table or the cell. Selecting multiple cells Select the first cell (beginning cell) and then while holding the [Shift] key select the next cell (end cell). All cells within the rectangle from the beginning cell to the end cell will be selected.  Additional or individual cells can also be added by selecting another cell while holding the [Ctrl] key when you click on the the new cell.

Changing the size of table objects

table	The size of the table is changed by selecting the table and then dragging on any of the four corners of the table. When the size of table is changed the column widths and row heights are scaled relative to the size change.

	 The size of the table has to be changed from the corners and not just the outside edge lines.
table-body, table-header, table-footer	The size of Objects within the table-body, header and footer depends on the size settings for the object. Unless the setting, such as with an image, is set to fit the size of the cell the size of the individual objects are not changed by changing the size of the table.
column	The width of a column is changed by dragging the line between the rows. When the width of a column is changed the width of the column to the right is also changed. Changing column widths does not change the size of the table except when the width of the last column is changed by dragging on the line on the right side of the last column.

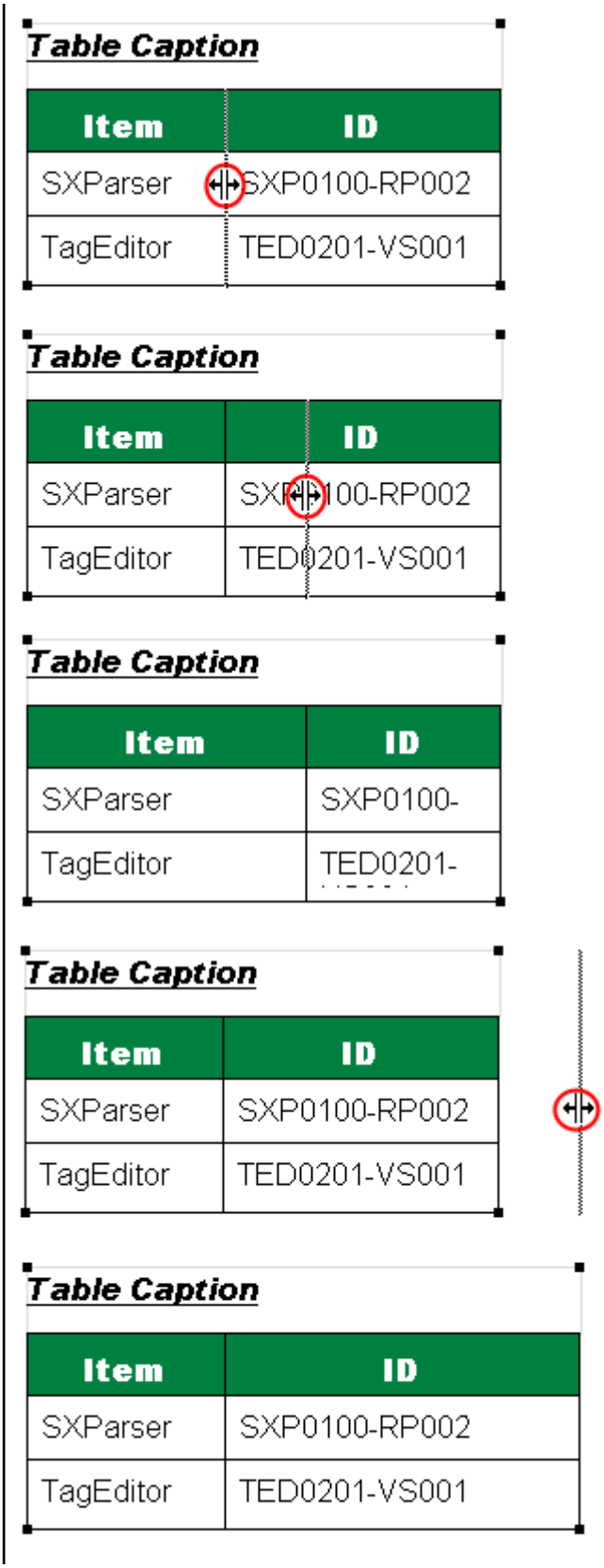
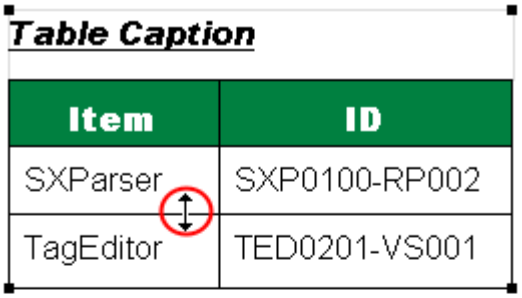
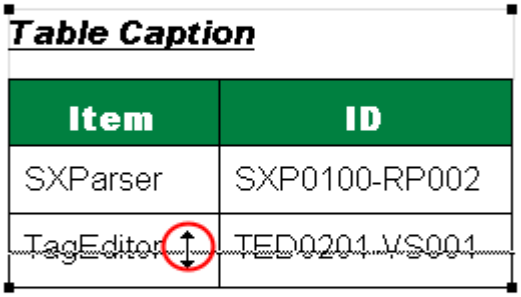
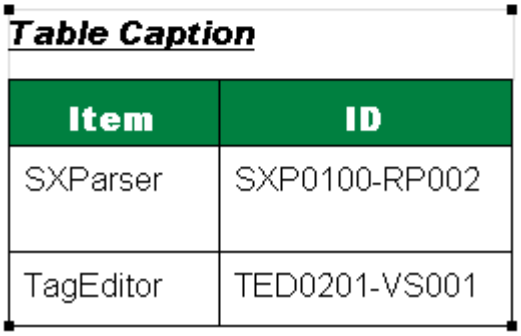
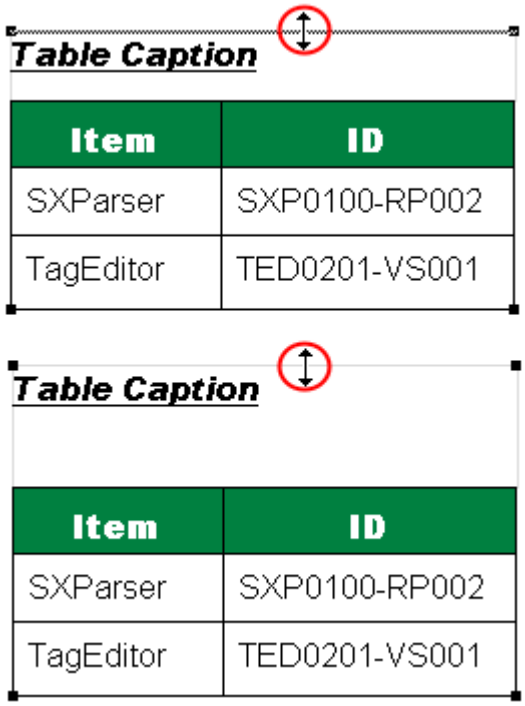


Table Caption
Item
ID
SXParser
SXP0100-RP002
TagEditor
TED0201-VS001
Table Caption
Item
ID
SXParser
TagEditor
Table Caption
Item
ID
SXParser
SXP0100-
TagEditor
TED0201-
Table Caption
Item
ID
SXParser
SXP0100-RP002
TagEditor
TED0201-VS001
Table Caption
Item
ID
SXParser
SXP0100-RP002
TagEditor
TED0201-VS001

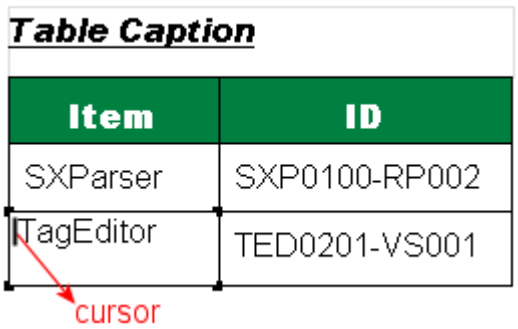
	You can change the width of an individual column and the overall width of the table by dragging on the line between the rows while holding the [Shift] key. The width of the column to the right does not change and only the width of the column selected is changed.
row	The height of a row can be changed by dragging on the botton line of the row. Other rows are not effected but the size of the table is changed.  *Table Caption* Item / ID SXParser / SXP0100-RP002 TagEditor / TED0201-VS001  *Table Caption* Item / ID SXParser / SXP0100-RP002 TagEditor / TED0201-VS001  *Table Caption* Item / ID SXParser / SXP0100-RP002 TagEditor / TED0201-VS001 If the [Shift] key is held while dragging the line between two rows, then the heights of the two rows changes. The size of the table does not change. To change the height of the caption above the table drag the top line of the table.

To change the height of the caption below the table drag the bottom line of the table.



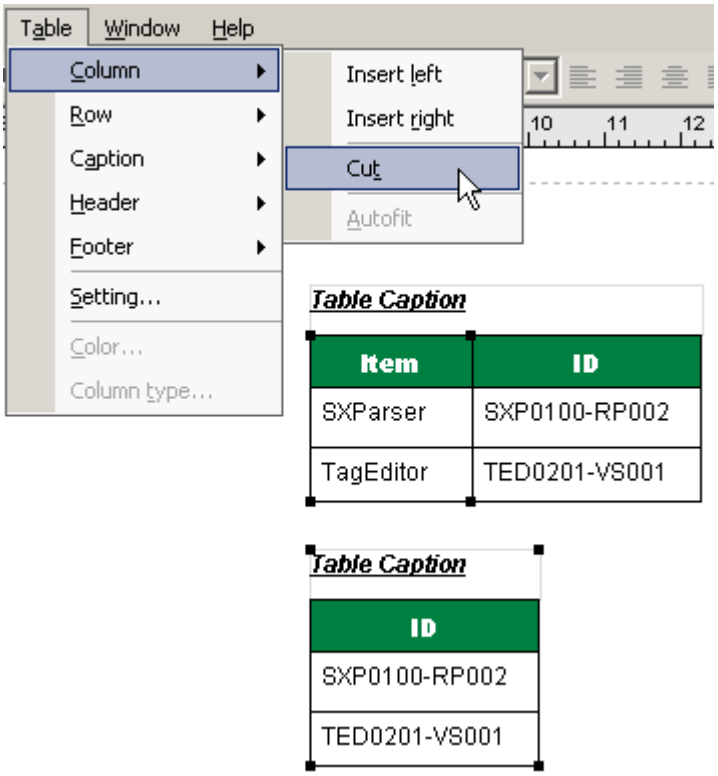
Selecting and editing objects in cells

By double-clicking a cell the object in the cell is selected and placed in the edit mode for text objects and the selection mode for image and barcode objects.

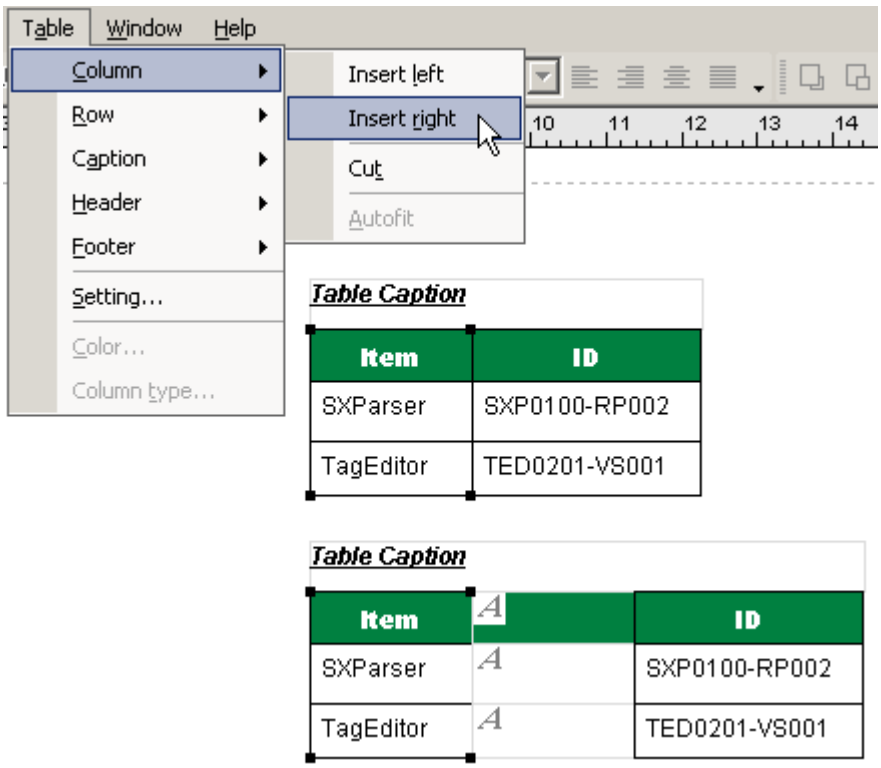


Cut and insert a Column

Select the column to be cut and then choose Cut in the Table / Column menu or Cut context menu which is shown by clicking the right mouse button.

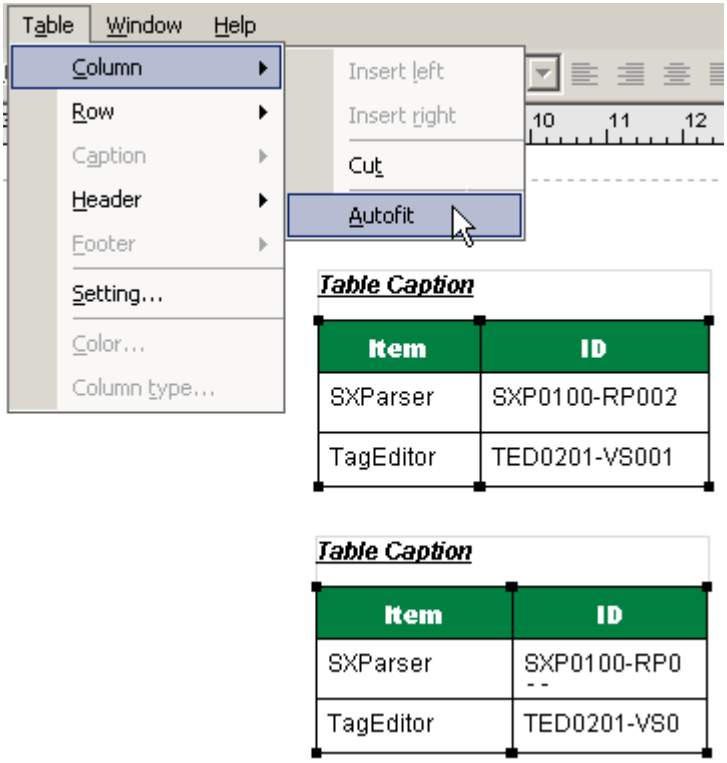


You can add new columns to the left or right of a column by first selecting the column and then selecting from the Table / Column menu Insert left or insert right.



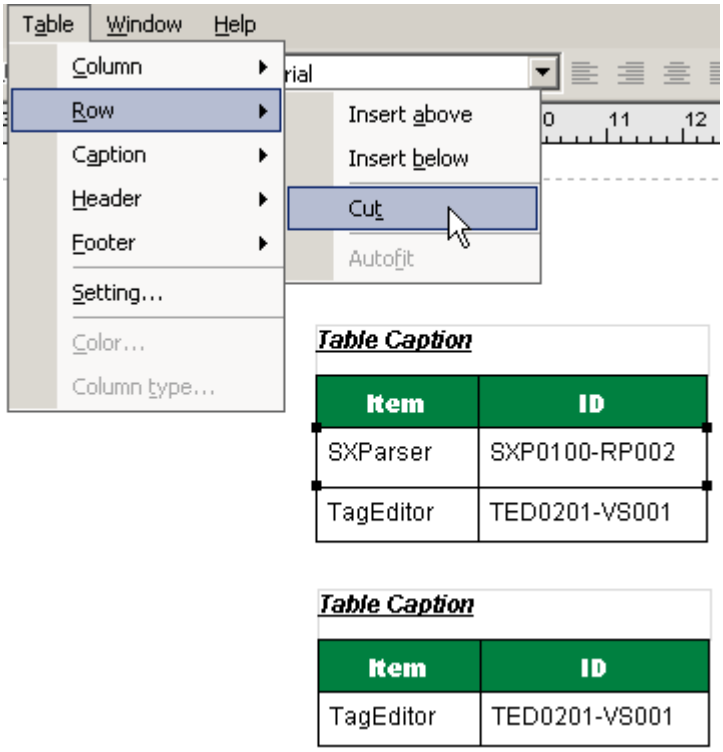
Autofit Column Width

Multiple columns can be set to the same width by selecting multiple columns and then selecting in the Table / Column menu or the context menu Autofit. The selected columns will be evenly resized within the width space occupied by the columns.

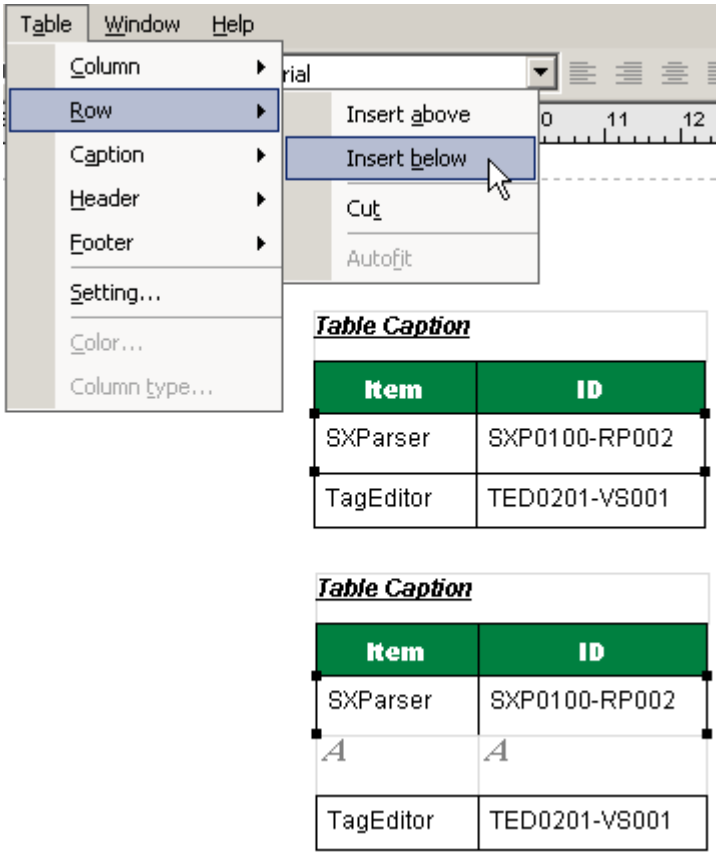


Cut and insert of Row

Select the target row in the table and choose Table / Row Cut from the menu or Cut in the context menu which is shown by clicking the right mouse button.

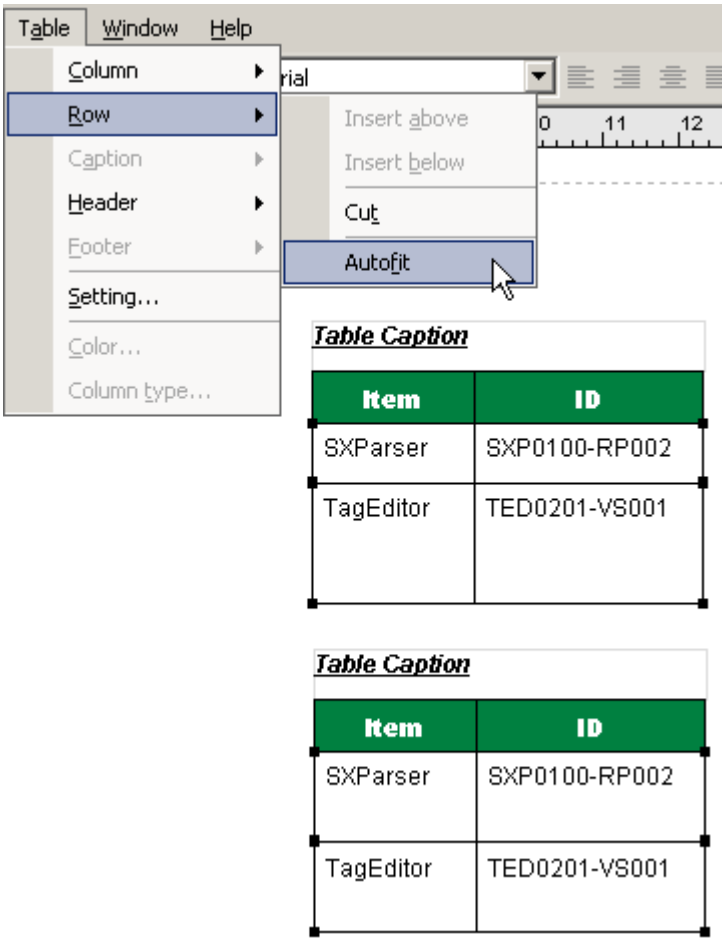


You can add a new row above or below a selected row by selecting the row and then choosing from the Table / Row menu Insert Above or Insert Below.



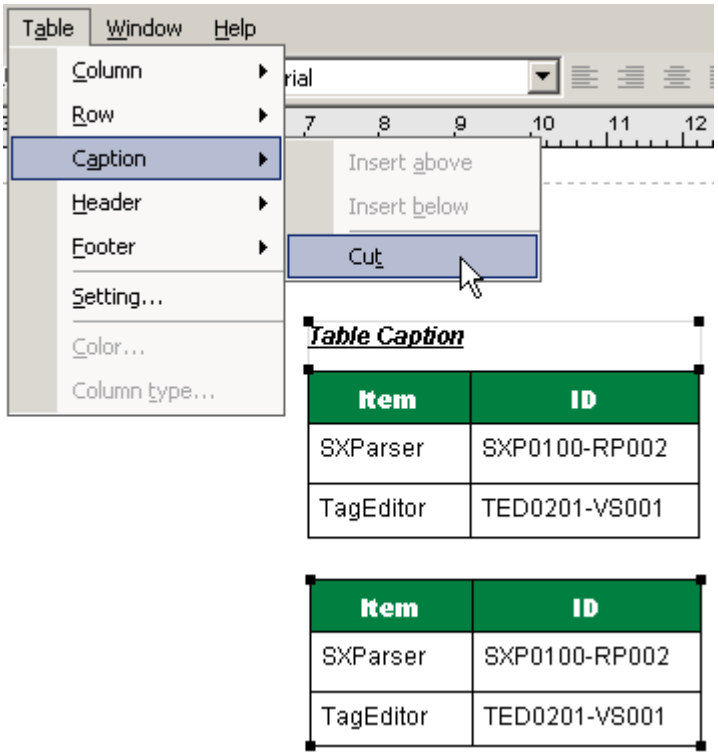
Autofit Row heights

Multiple rows can be set to the same height by selecting multiple rows and then selecting in the Table / Row menu or the context menu Autofit. The selected rows will be evenly resized within the height space occupied by the rows.

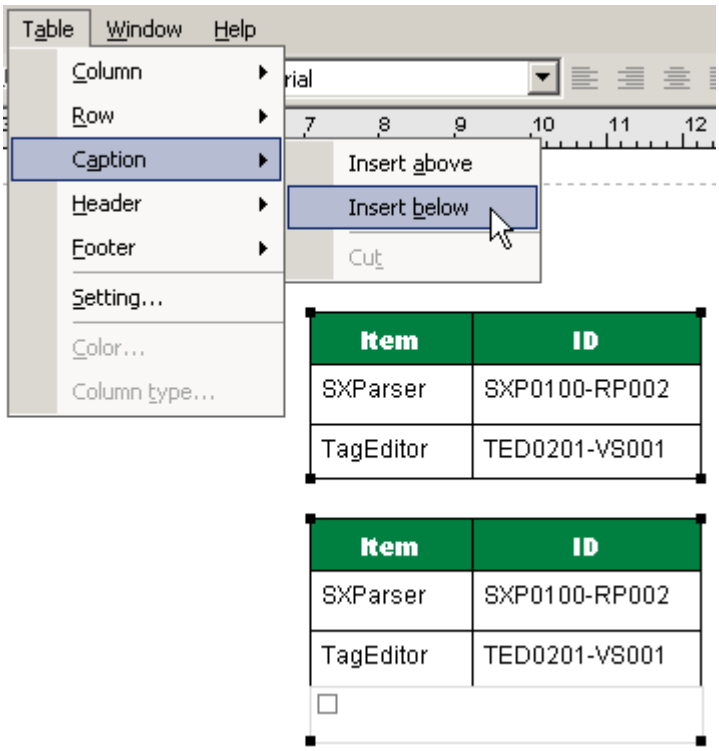


Cut and insert a Caption

To cut a caption select the caption and then in the Table / Caption menu choose Cut. This can also be done through the context menu which is shown by clicking the right mouse button.

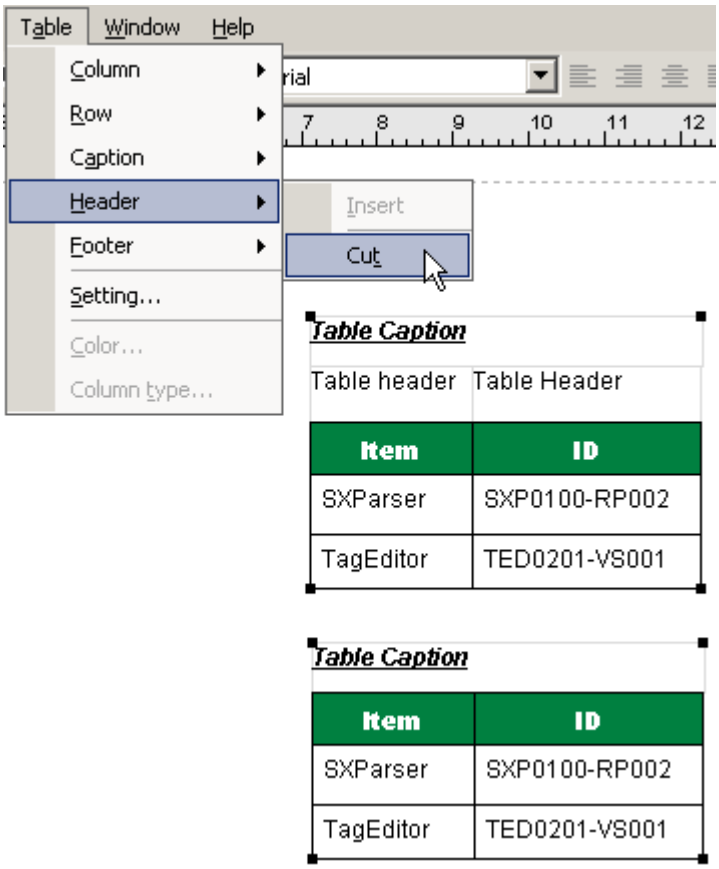


To insert a caption select the table and then in the Table / Caption menu choose Insert Above or Insert Below. This can also be done through the context menu which is shown by clicking the right mouse button.

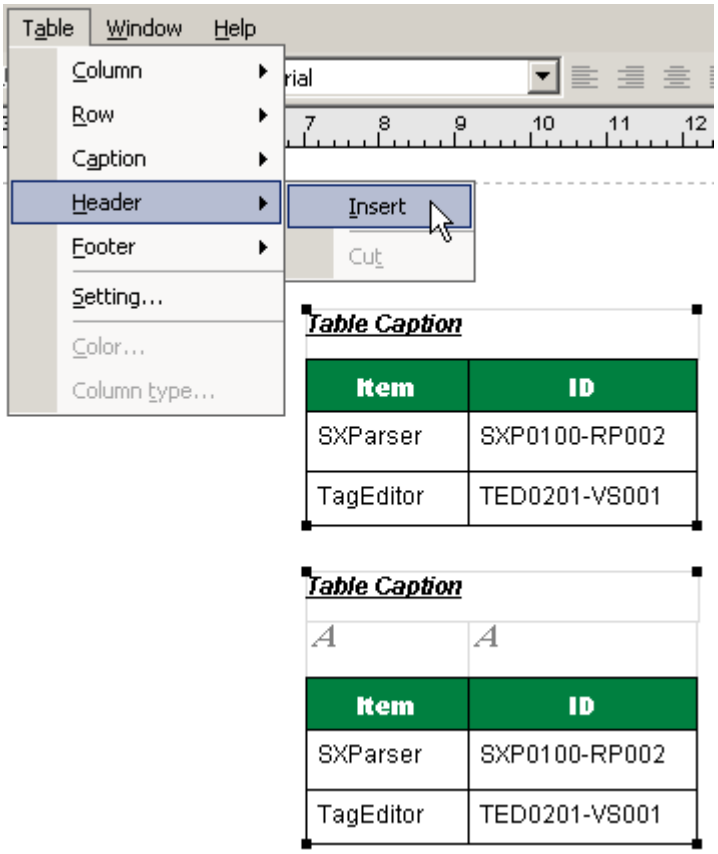


Cut and insert a Header/Footer

To cut a Header or Footer select the target table and then in the Table menu choose either Header / cut or Footer / cut. This can also be done through the context menu which is shown by clicking the right mouse button.



You can add new Header/Footer to the table by using the Insert Header or Footer in the Table menu.

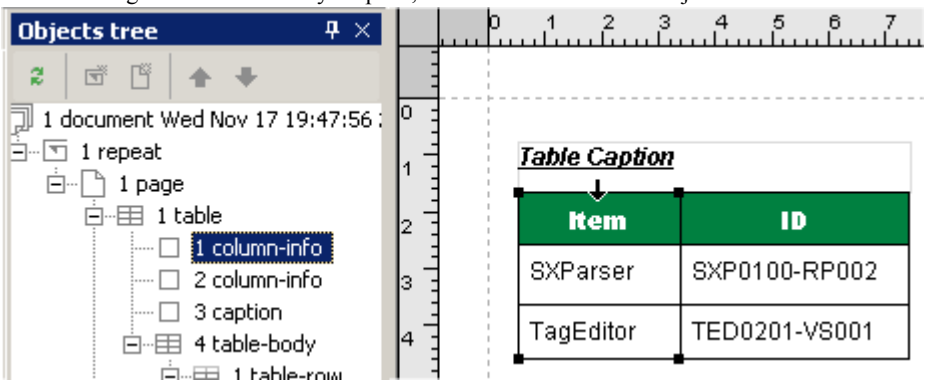


Changing the object type for a column

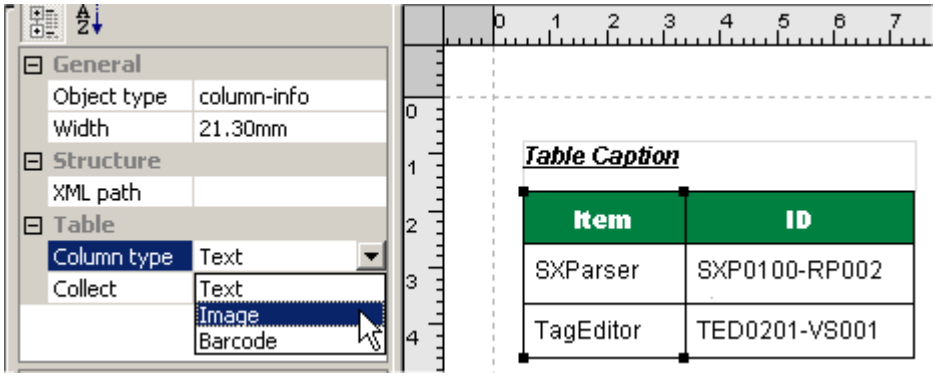
By default the object type in a cell is text. By columns the Object type can be changed to either an image or barcode object.

1. Changing the properties of a column

   Select the target column in the layout pane, or "column-info" in the Objects tree window.



   With the column (or "column-info") chosen open the Properties window and specify the object type of Column type.



2. Using the "Table setup" dialogue

   Select the table and open the Table setup dialogue from Table / Setting menu. Open Column setting tab and specify Type of object for the column.

Project and object settings

This chapter explains the Project setup and object settings that control the formatting of a report.

17 Project setting

The report layout that XSL Report Designer creates is called the "Project." The various pieces that XSL Report Designer uses to construct a project are call "Objects." All the informatin about the project design and layout and the objects are stored in a project file.

17.1 Project settings

The following settings (Project setup) are necessary for XSL Report Designer when making a project:

- Layout type
- An XML data file to be referred to for structure, path and repeat information.

When making a project XSL Report Designer uses the XML data file as a reference to map the elements to the objects and how they should be formatted. For TSV/CSV data XSL Report Designer automatically creates an XML data file. The setting for XML data and TSV/CSV data are:

Reference data file	XML file that refers to structure	Layout type	Repeat XML path
XML data file	The XML file that refers to structure is set through the New project guide 3/3 or the Project setup dialogue of the Project menu	Fixed type, Flow type or Label type	Specify the XML path in the XML file that refers to the structure
TSV/CSV data file	The name XSL Report Designer gives to the XML data that it automatically generates from the TSV/CSV file is placed on the New project guide 3/3	Flow type only	Set automatically according to the setting of the Data items in the TSV/CSV file (table/list)

17.2 Layout type

The layout pattern for printing the report is called the "Layout type." When the original data file is XML the layout type can be:

1. Fixed type
2. Flow type
3. Label type

Once the layout type has been selected for a project it cannot be changed. It is possible to copy and move objects with their settings from one project to another project.

For TSV/CSV files the layout type is always "Flow type."

17.3 Reference data file and XML path

When you start a new project you have to specify either an XML or a TSV/CSV data file through the New project guide.

1. XML data file
2. TSV/CSV data file


Note;
XSL Report Designer must convert the TSV/CSV file to XML in order to use the data for the design process and also for the Runtime Engine to transform the data to XSL-FO for print and PDF output. The TSV/CSV conversion is built into XSL Report Designer and is an automatic process.

Referenced XML data file

- XML file that is referrd to for structure

  You can specify in the New project guide 3/3 or the Project setup dialogue of the Project menu the XML file that XSL Report Designer refers to when working on a project.


Note;

- XSL Report Designer creates a layout design for printing predefined forms and reports containing XML data. The XML data for printing is assumed to have a constant repetition pattern in the tree structure. It is not possible with XSL Report Designer to design a layout for documents such as general books and technical manuals because they do not have a constant repetition pattern of the tree structure of their XML data.
- XML files with namespaces have to declare all namespaces in the root element.
- Default Namespaces are not supported by the Runtime Engine or XSLT processors. Thus Default Namespace declaration in a file must be deleted before trying to process with XSLT and the Runtime Engine. This is a limitation of XPath.

- Repeat XML path in the project

  Repeat XML path in the New project guide 3/3 or the Project setup dialogue of Project menu specifies the XML path to the element in data to be processed as the main repeat when formatting data for print or PDF. Each repetition of the main repeat in data creates a new report in output.

  The two methods of setting the XML path to the main repeat, besides the New project guide 3/3, are:

  1. Through the Project setup dialogue in the Project menu.
  2. By choosing the highest repeat object in the Objects tree window and setting it to the XML path in the Property window.

TSV/CSV data file

- XML file that refers to structure of TSV/CSV data

  When the project refers to a TSV/CSV file XSL Report Designer automatically generates an XML file that is specified in the New project guide 3/3.

Example of XML file generated from TSV/CSV file automatically

CSV data file

```
year 2002,1st Quarter,2nd Quarter,3rd Quarter,4th Quarter,Total,Average
Product_A,"1,000","1,050","1,100","1,150","4,300","1,075"
Product_B,"1,100","1,150","1,200","1,250","4,700","1,175"
Product_C,"1,200","1,250","1,300","1,350","5,100","1,275"
Product_D,"1,300","1,350","1,400","1,450","5,500","1,375"
quarterly average,,,,,,"1,225"
```

XML file automatically generated by XSL Report Designer

```
<?xml version="1.0"?>
<sample>
    <record>
        <member1>year 2002</member1>
        <member2>1st Quarter</member2>
        <member3>2nd Quarter</member3>
        <member4>3rd Quarter</member4>
        <member5>4th Quarter</member5>
        <member6>Total</member6>
        <member7>Average</member7>
    </record>
    <record>
        <member1>Product_A</member1>
        <member2>1,000</member2>
        <member3>1,050</member3>
        <member4>1,100</member4>
        <member5>1,150</member5>
        <member6>4,300</member6>
        <member7>1,075</member7>
    </record>
    <record>
        <member1>Product_B</member1>
    .
    .
    .
    </record>
</sample>
```

The same XML file is generated from the TSV/CSV file regardless of whether it is going to be a table or list in XSL Report Designer.

■ Repeat XML path

When a new project is created that refers to a TSV/CSV file how to treat the data items is specified by the Data items in the New project guide 2/3.
The options are:

to be Table
This option inputs the TSV/CSV data as a table in the project.
to be List
This option inputs the TSV/CSV data as a list in the project.

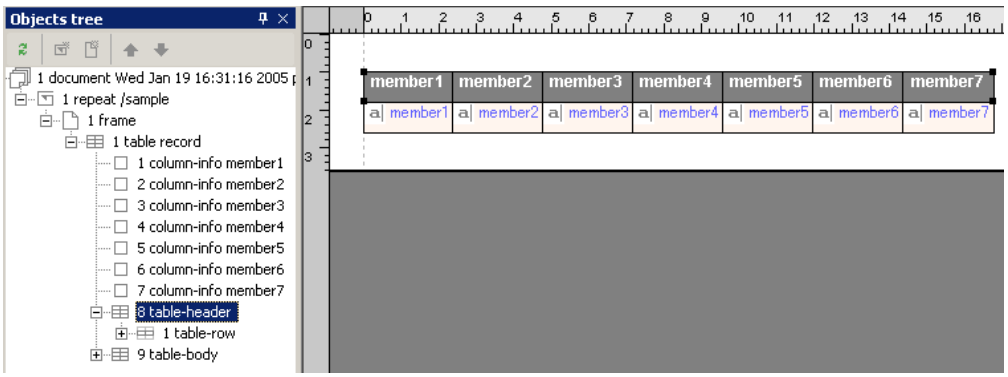
The layout is designed and the XML path is set automatically in the project according to the specified content of the TSV/CSV input.

The path setting for the XML elements to the objects for a Table and List are as follows:

Generated element	Description	Reflection in data item	
		to be Table	to be List
<sample>	Becomes the root of XML file	Set to the Repeat XML path of the project (main repeat)	not used
<record>	One line of TSV/CSV data is considered to be one record. This element is repeated by the number of records	Set as the Repeat XML path in the table object	Set to the Repeat XML path of the project (main repeat)
<memberN>	Each element in the record (N is made by the number of elements from 1)	Arranged as a text object in the table object with the XML path set to each element	Arranged as a text object with the XML path set to each element

Examples of a Table and a List along with their layout pane from the project file produced from TSV/CSV data.
Once you have completed the New project guide for a TSV/CSV file the layout pane is opened and a project file according to specification is displayed. The first screen of each layout pane is as follows.

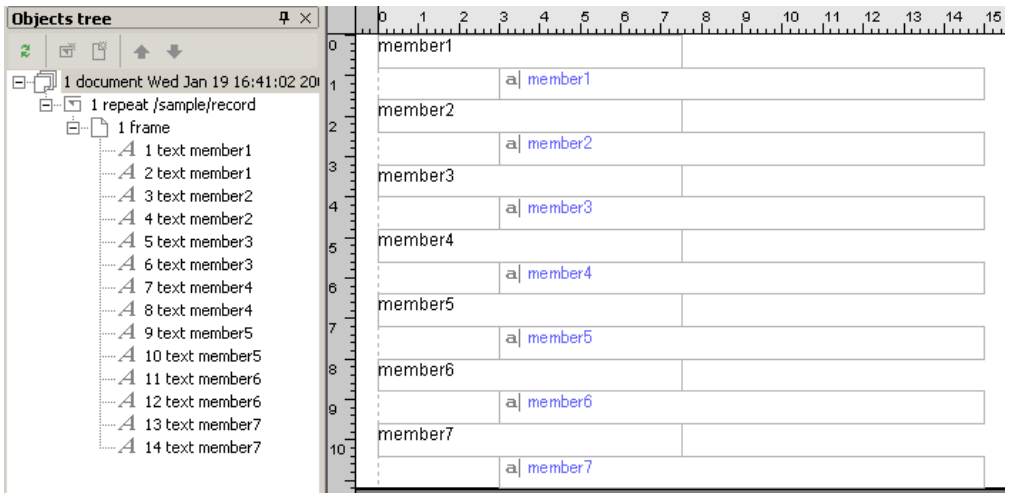
■ When "to be Table" is specified



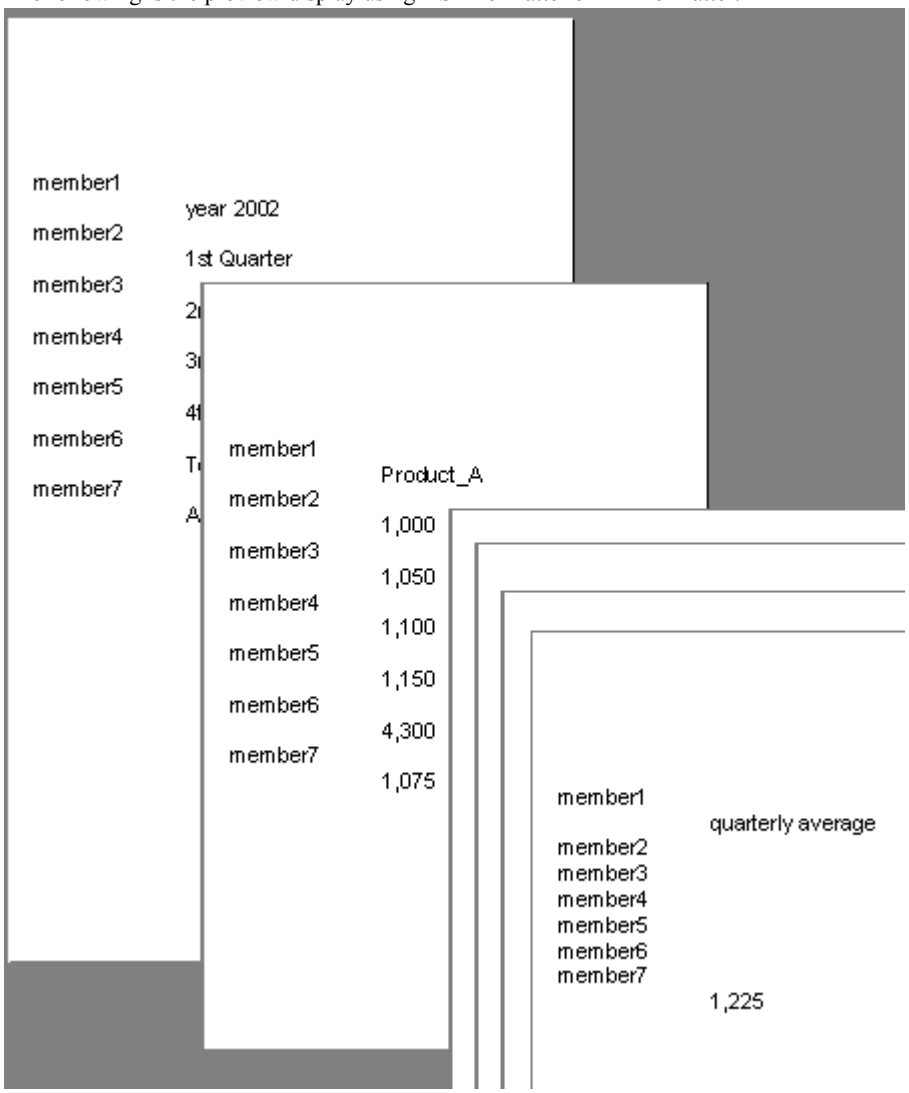
In this project file, "sample," the root element is set as the main repeat. The table object is placed as the child of the main repeat and the static text of "memberN" is automatically added to table-header. The table can now be freely modified.
The following is the preview display using XSL Formatter or AH Formatter.

member1	member2	member3	member4	member5	member6	member7
year 2002	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	Average
Product_A	1,000	1,050	1,100	1,150	4,300	1,075
Product_B	1,100	1,150	1,200	1,250	4,700	1,175
Product_C	1,200	1,250	1,300	1,350	5,100	1,275
Product_D	1,300	1,350	1,400	1,450	5,500	1,375
quarterly average						1,225

■ When "to be List" is specified



In this project "sample/record" is set as main repeat. The text objects are arranged in list form and a static text of "memberN" is added automatically.
The following is the preview display using XSL Formatter or AH Formatter.



18 Object and Property

The items of a report to be arranged in the layout of XSL Report Designer are called "Objects." "Property" (attributes) can be set for each object.

18.1 List of object

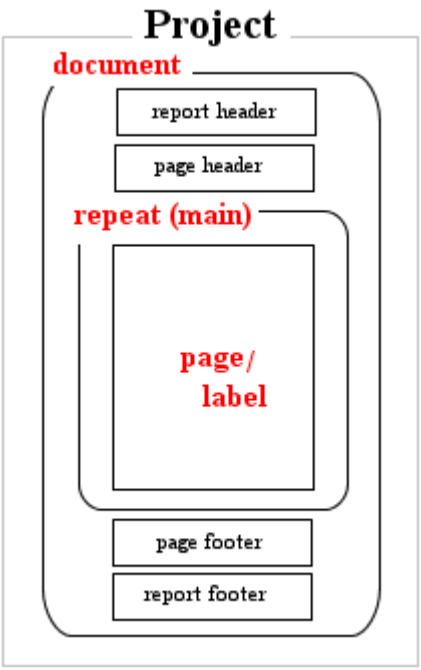
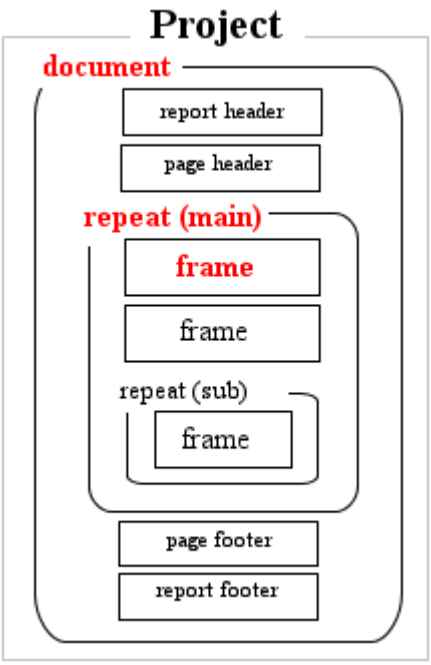
XSL Report Designer uses objects to set the frame of report (composition object) and as objects that are arranged on the form (layout object).

When used		Object name	Description	Operation
composition object	Root	document	The root of the project file. All projects always have one document object.	Example （page 130)
	Header/Footer for report or page	report header/ footer, page header/ footer	When specified the Report header creates either a page at the front of the project and the report footer creates a page at the end of the project or a header at the very beginning of the project and footer at the very end of the project. These are only output once for the entire report. Page header/footer is output on each page.	Example (report-header/ footer) （page 133)
	The object to be repeated	repeat	All projects have a main repeat object specified by the Repeat XML path. Flow type layouts can have multiple sub repeats that can arranged as the children of the main repeat.	Example （page 137)
	Grouping of object for layout	page object, frame object, label object	Only one type can be used with each project.	Example (page) （page 140)
layout object	The building blocks of a layout, these	text object, image object, barcode object, table object,	Used to arranges the content for formatting.	Example （page 173)

	are arranged on the layout pane.	caption, column-info, table-header/ footer, table-body, table-row, table-cell, line object	Specifies the position and style for each piece of content in the layout.	

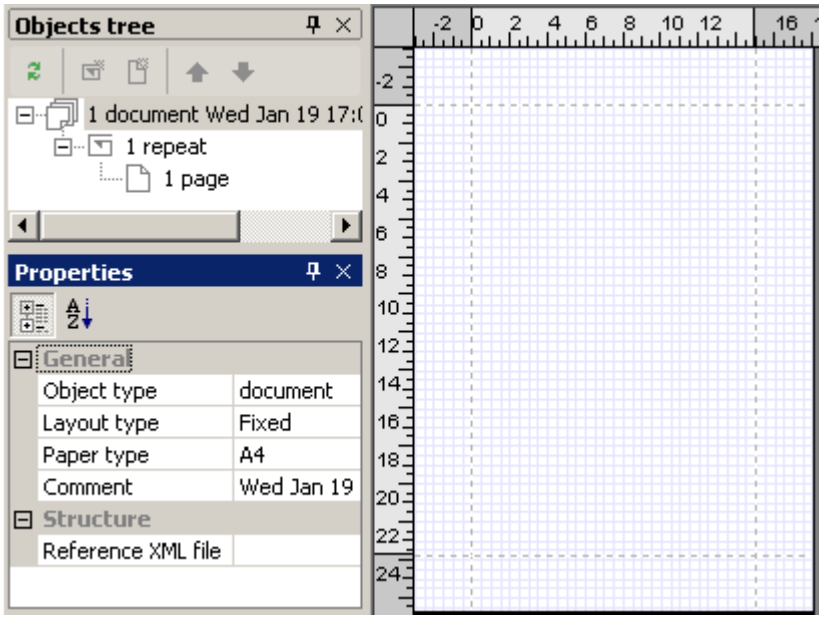
Relation of composition objects in the project

The relationship between composition objects in the project depends on the layout type as illustrated below.

Fixed type/Label type	Flow type
	
The page object is used for Fixed type layouts and the label object is used for Label type layouts.	The frame object is used for Flow type layouts.

18.2 Document object

The document object is the root object of the project file. The acutal document object is not displayed on the layout pane. The "document" object has to be selected on the Objects tree window.



Properties for Document object

■ General Properties

Properties	Value	Description
Object type	document	The root object of the project.
Layout type	Fixed/Flow/Label	The project layout type. Cannot be changed.
Paper type	arbitrary	The paper type/size selected for the project. Cannot be changed here.
Comment	arbitrary	Character string that can be freely edited. Has no effect on formatting or the project.

■ Structure Property

Properties	Value	Description
Reference XML file	Path of reference XML file	The XML file that has been set as a reference for the structure. Cannot be changed here.

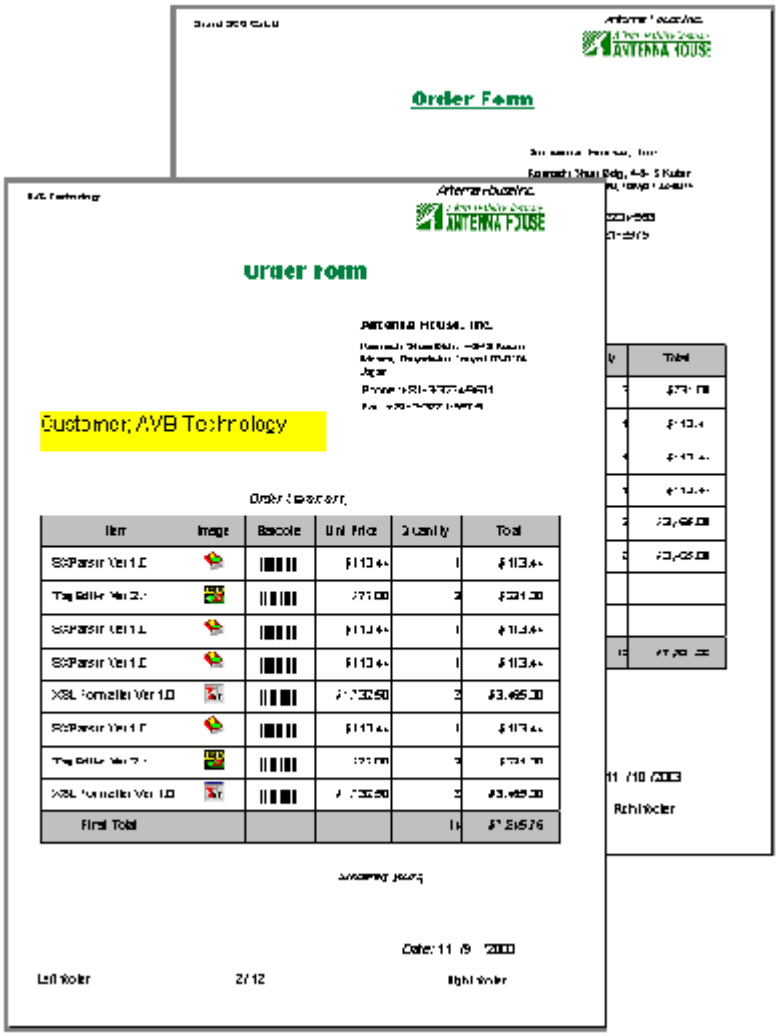
19 Composition objects and properties by layout type

This section explains composition object and properties by each layout type.

19.1 Fixed type

In the Fixed type layout print data is arranged on the page (page object) in fixed locations. The position and size of objects are fixed except for the table object which can be set in the properties to automatically expands based on the data. This might cause the table to overlap the object below it. When formatting each repeat of data creates a new form.

Output example of Fixed type

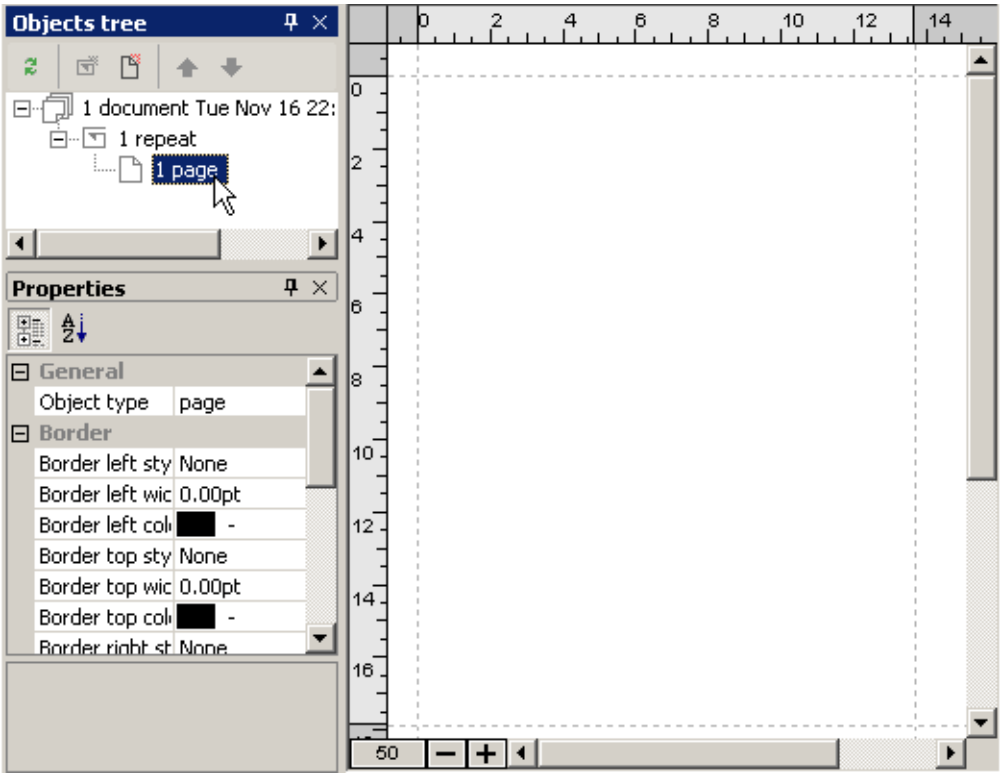


Page header/footer can be specified. Report header/footer can be specified. One record of data can compose multiple pages such as in an order form where the first page is the order and the second page is the terms and conditions.

The screen display for Fixed type

The first screen for the Fixed type project shows the following:

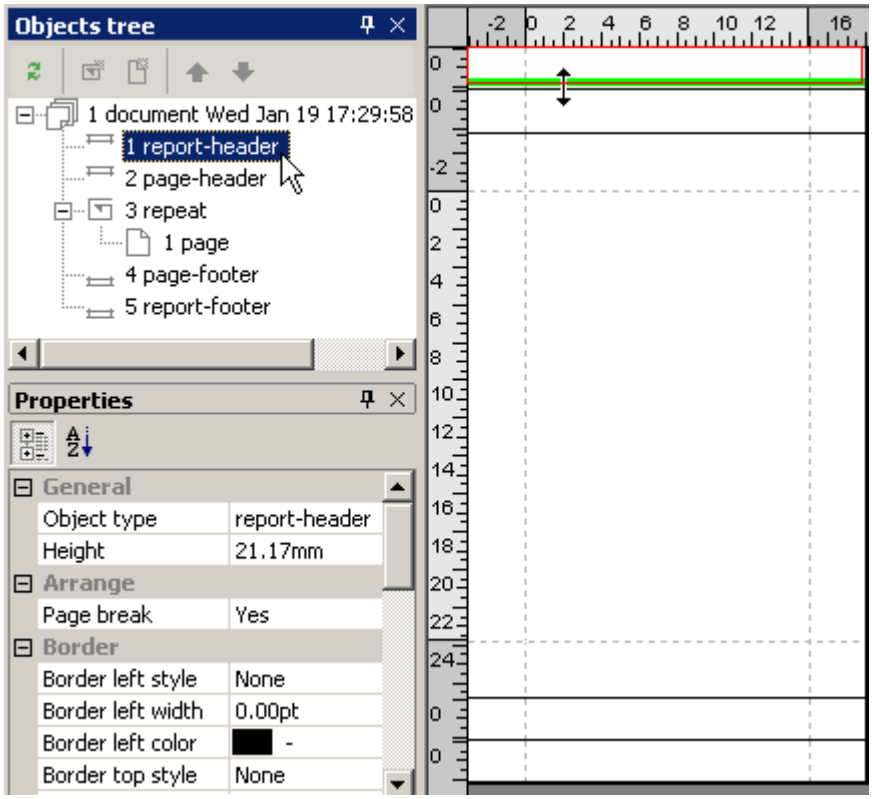
In the Objects tree window you can see that the repeat object has been put under the document object and a page object has been put under the repeat object.
In the layout pane the paper with the page margins is displayed. Inside the margins is the body area. The body area is the page object.

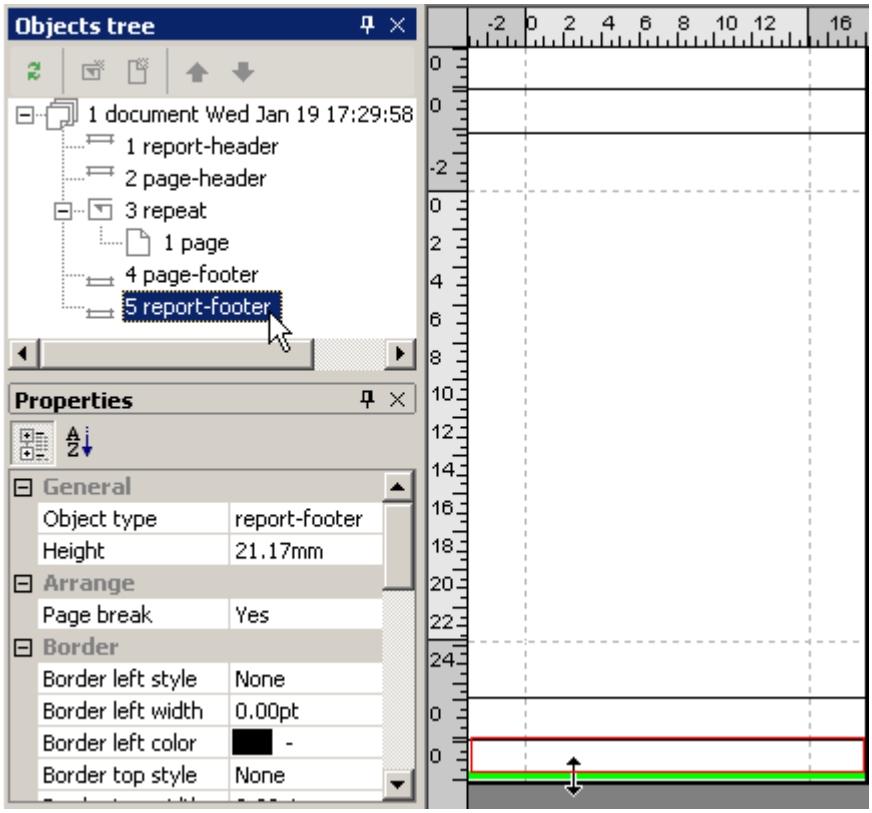


Report-header/report-footer object for Fixed type

For a Fixed type layout Report header is a page at the front of a project and Report footer is a page at the end of the project. When the report header or report footer in the Header/Footer dialogue in the Structure menu is selected a report-header object or report-footer object is put on the layout pane with the header at the very top of the layout pane and the footer at the very bottom. When the report-header or report-footer is selected in the Objects tree window a green line is displayed on the layout pane below the header or footer.

For Fixed type layout the report header/report footer is always output to only one page of the report and uses the same paper as the body. The report-header/report-footer object corresponds to a rectangular area that has the height specified by the Height property from the top margin of the paper.





Properties for report-header/report-footer object:

■ General Properties

Properties	Value	Description
Object type	report-header/report-footer	Page preceeding / page following the actual reports of a data set.
Height	Numeric value (mm/in/pt)	Displays the height of the area the Report header or footer will print on. To change the height drag the green line under report header/report footer up or down in the layout pane. It is also possible to edit the numerical value in the Properties window.

■ Arrange Property

Properties	Value	Description
Page break	Yes	For a Fixed type layout the Report Header and Report Footer are always output to new pages or at the very beginning and end of the report.

■ Border Properties

Properties	Value	Description
Border style for Top / Bottom / Left / Right	None/Dotted/Dashed/Solid/Double/ Groove/Ridge/Inset/Outset	Used to individually set the styles for the top, bottom, left and right borders.
Diagonal style		Used to set the styles for the Diagonal and Reverse diagonal.
Border width for Top / Bottom / Left / Right	Numeric value mm (millimeters) in (inches) pt (points)	Used to individually set the widths for the top, bottom, left and right borders.
Diagonal width		Used to set the widths for the Diagonal and Reverse diagonal.
Border color for Top / Bottom / Left / Right	Hexadecimal RGB value starting with #, or W3C color name.	The color for each border is individually set.
Diagonal color		Diagonal and Reverse diagonal color.

■ Print Properties

Properties	Value	Description
Print page header	Yes/No	When report header and report footer is set to print used to set whether to also print page header.
Print page footer	Yes/No	When report header and report footer is set to print used to set whether to also print page footer.

Print control	Print/Not	Controls printing of the input object. "Print" prints according to the setting. "Not" doesn't print regardless of the setting.

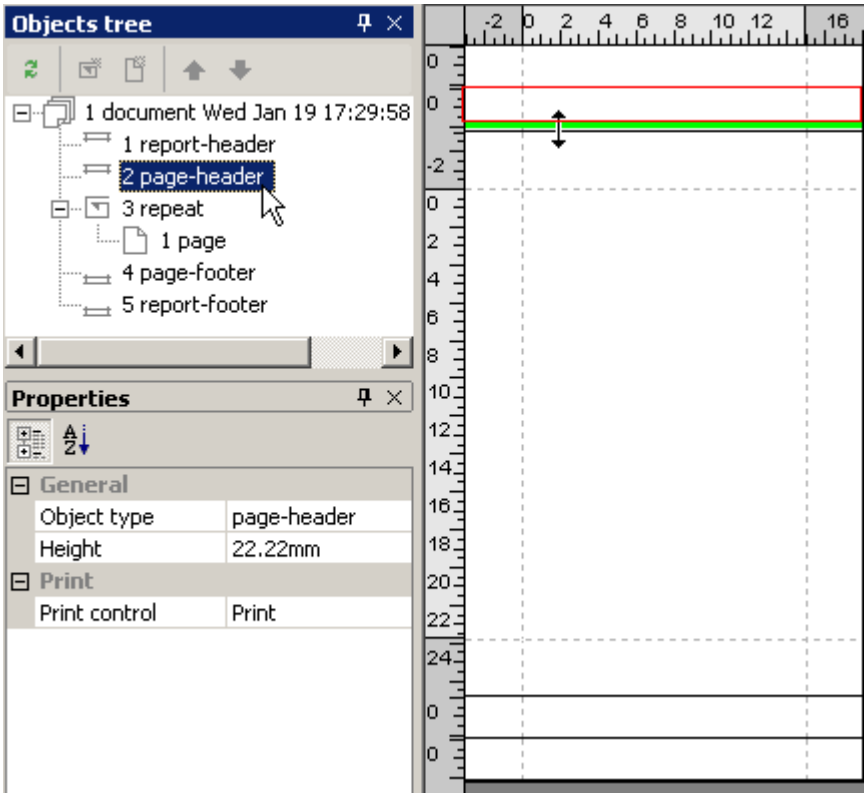
■ Page number Property

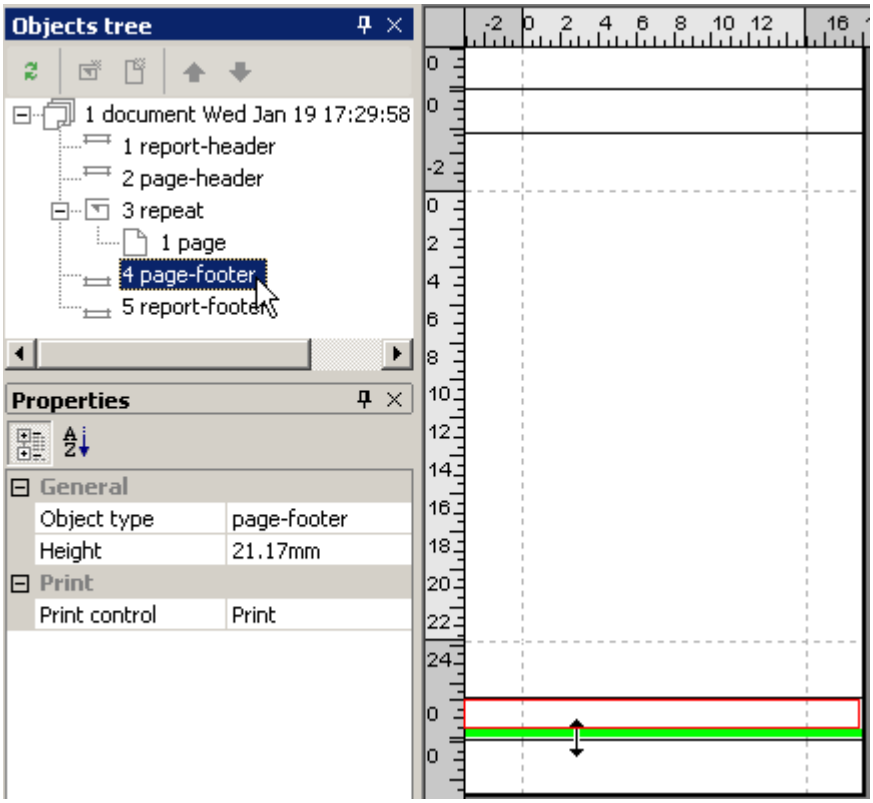
Properties	Value	Description
Include page count	Yes/No	Sets whether to include report header/report footer in the page count.

Page-header/page-footer object for Fixed type

A page-header object or page-footer object is placed on the layout pane when you specify page header or page footer in the Header/Footer dialogue in the Structure menu. The page header and page footer are displayed directly above and below the page body. Report header and footer display outside the page header and footer. When page-header or page-footer is selected in the Objects tree window a green line is displayed on the layout pane below the header or footer.

Page-header object corresponds to a rectangular area that has the height specified by the Height property from the top margin of the paper. Page-footer object corresponds to a rectangular area that has the height specified by the Height property from the bottom margin of the paper.





Properties for page-header/page-footer object:

■ General Properties

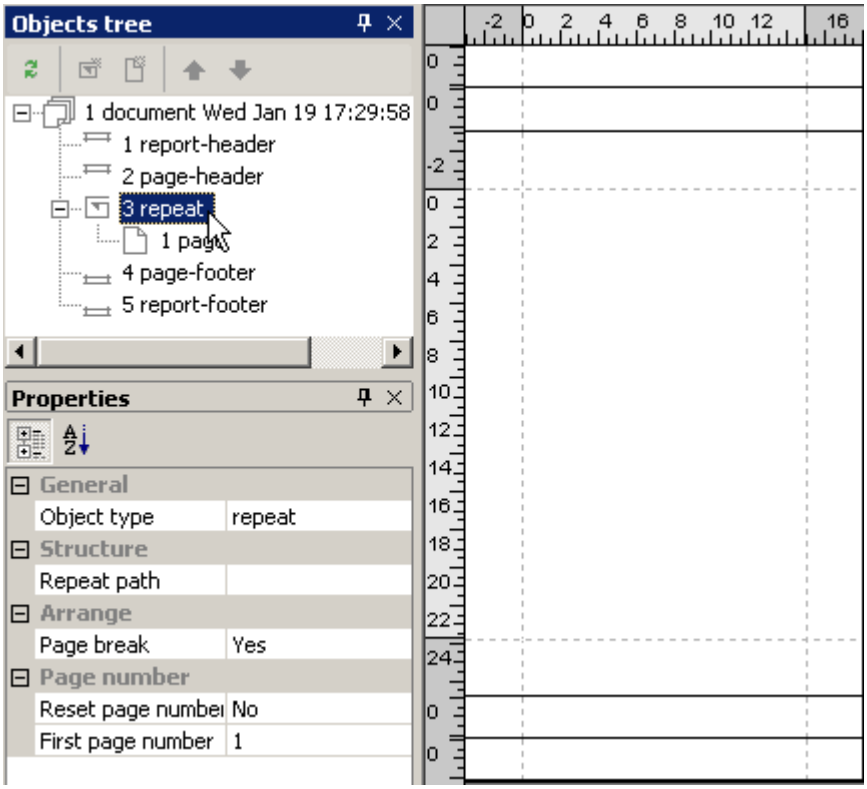
Properties	Value	Description
Object type	page-header/page-footer	The type of the object is page-header/page-footer.
Height	Numeric value mm (millimeters) in (inches) pt (points)	Displays the height of the page header or page footer. To change the height drag the green line under page header/page footer up or down in the layout pane. It is also possible to edit the numerical value in the Properties window.

■ Print Property

Properties	Value	Description
Print control	Print/Not	Controls printing of the input object. "Print" prints according to the setting. "Not" doesn't print regardless of the setting.

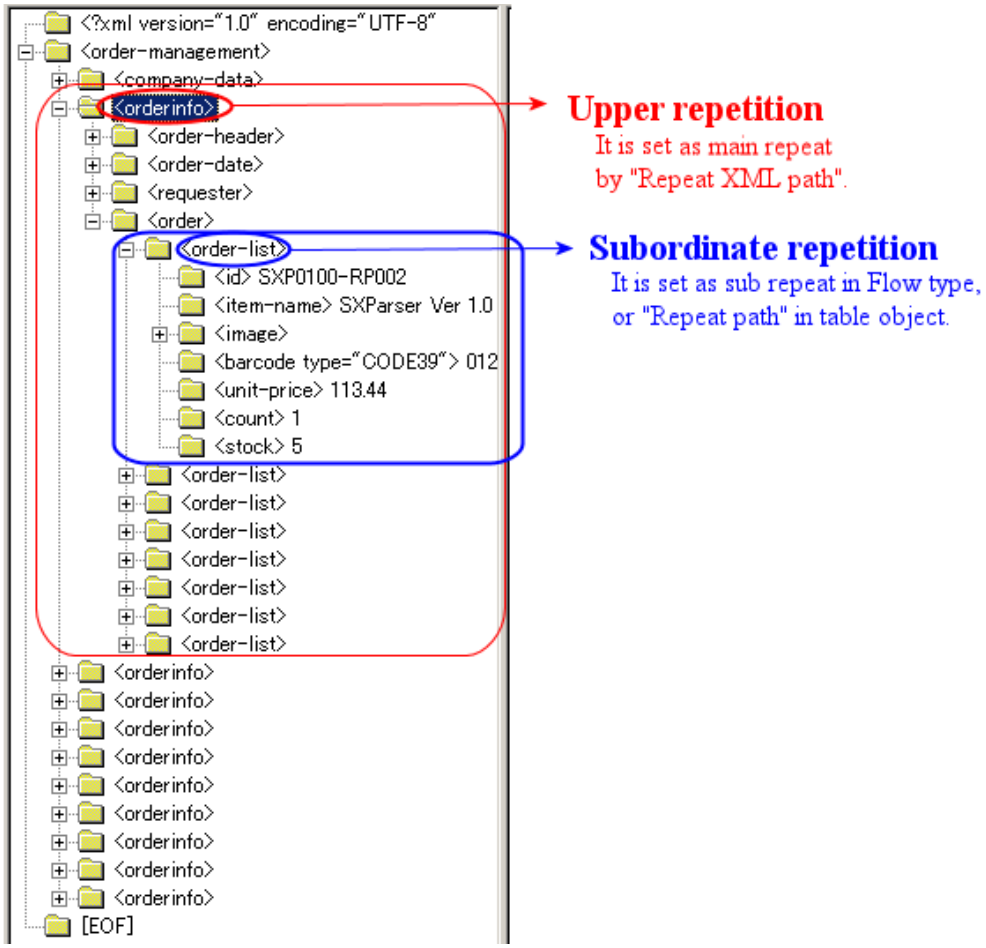
Repeat object for Fixed type

A Fixed type project has one repeat object, the main repeat.



Example of setting of repeat

Using the sample file, "Sample-data.xml," (provided with XSL Report Designer) the relationship of the main repeat to the repetition of the elements of XML data specified by Repeat XML path can be seen.



In the sample XML file ten "order-info" elements exist as children of the "order-management" element. Moreover, "order-info" has eight "order/order-list" elements as the descendant element.

In the project file the "orderinfo" element is specified as the "Repeat XML path." Whenever "orderinfo" appears in data the main repeat object is generated and a new report is produced. For this example the main repeat produces one page; orderinfo is repeated in the data 10 times, thus producing 10 pages. Because a Fixed type project can only have one repeat, the repetitions in the "order-list" element are in a subordinate position to the table in this example.

The Repeat object is not displayed on the layout pane and must be selected from the Objects tree window in order to display properties in the Property window.

Properties for repeat object:

■ General Property

Properties	Value	Description
Object type	repeat	The repeat object.

■ Structure Property

Properties	Value	Description
Repeat path	Path of the first main repeat element within the XML data	Specifies which part of the XML data is to be formatted.

■ Arrange Property

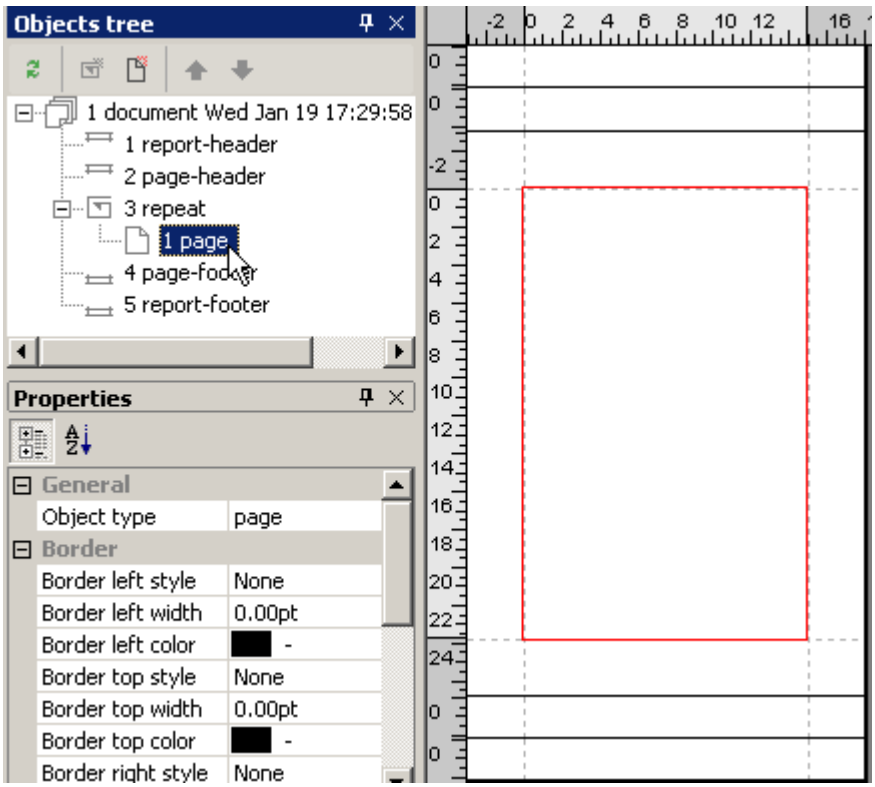
Properties	Value	Description
Page break	Yes	Specifies whether or not to put a page break at the end of the repeat. For Fixed type the page break is always set to yes.

■ Page number Properties

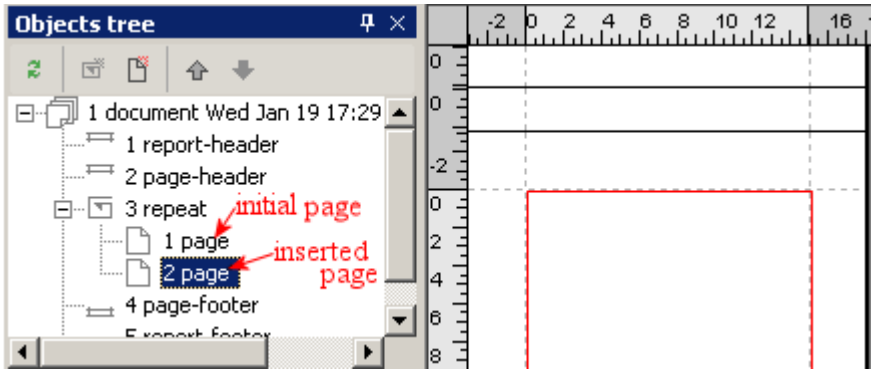
Properties	Value	Description
Reset page number	Yes/No	Specifies whether to initialize the page number for each repeat object in the set.
First page number	arbitrary	Used to set the first page.

Page object

The page object is contained within the main repeat of the Fixed type. When designing a layout each layout object is arranged on the page object. The XY coordinates for objects on the layout is measured from the left and top margins of the page body. Layout objects can also be set in the page margins; however the coordinate value for the object will still be based on the left and top margins of the page body. A page can be added by Insert frame (page) function.



Multiple page objects can be inserted by Insert frame (page) in the Structure menu.



Properties for page object:

- General Property

Properties	Value	Description
Object type	page	The page object.

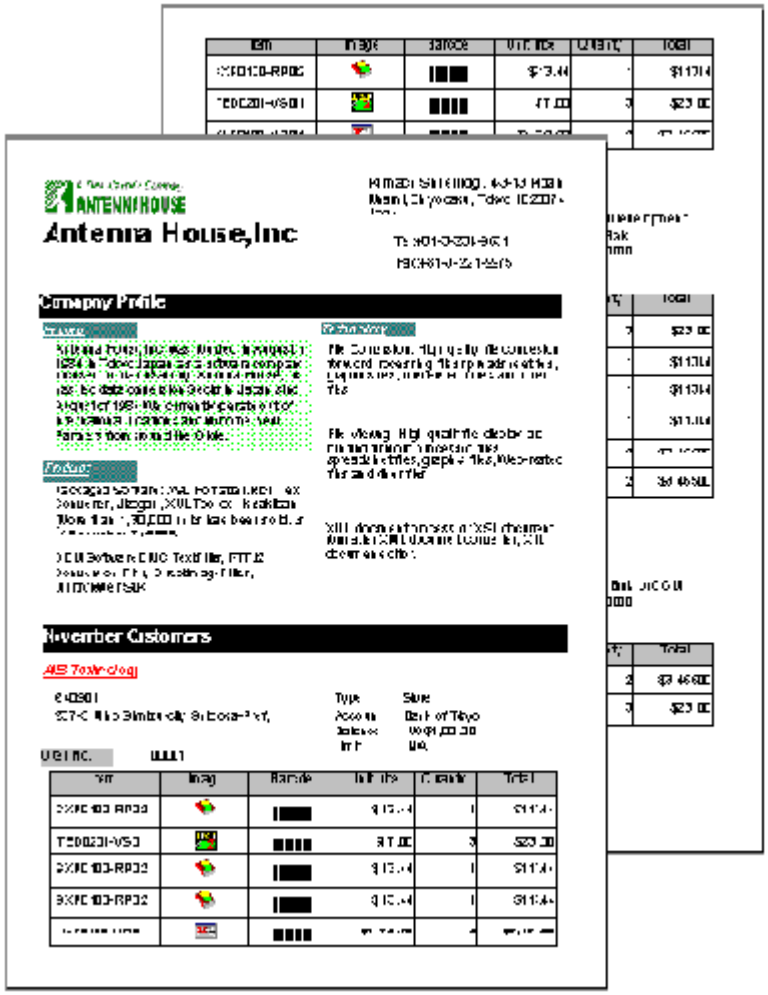
- Border Properties

  Refer to Border Properties (page 135)

19.2 Flow type

Flow type layouts use frames (frame object) to enclose a group of layout objects. The frame objects are then arranged sequentially to print. In Flow type the layout object can expand or contract freely by the size of the content data. In addition, the frame object containing a group can expand or contract along with the expansion and contraction of the internal layout objects. The position of following objects changes due to the expansion and contraction of the object. For instance when a table object expands or contracts according to the number of lines of data the positions of the objects following the table also changes. The Flow type layout derives its name from the objects floating or flowing into the layout. There is no concept of repeating for each page; instead the number of pages in the printed layout for each report will depend on the size of the repeating data.

Output example of Flow type

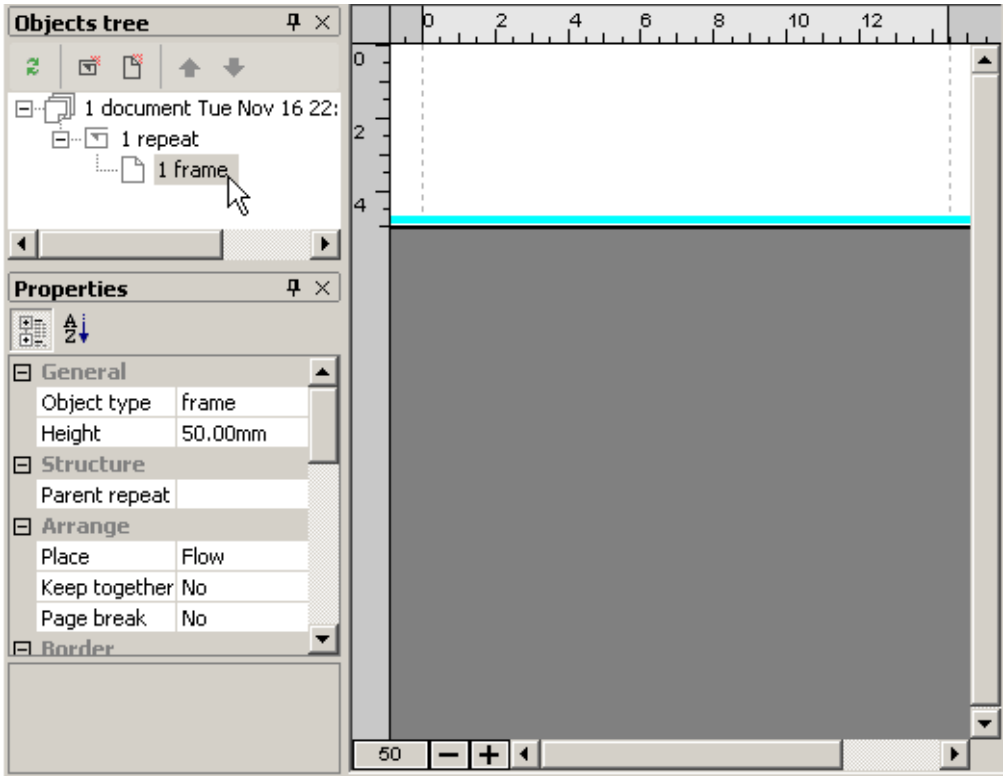


Page header/footer can be specified. Report header/footer can be specified. The layout is composed of multiple frames as opposed to pages.

The screen display for Flow type

Once a Flow type project has been selected in the New Project Guide the first screen for the Flow type will be as follows:

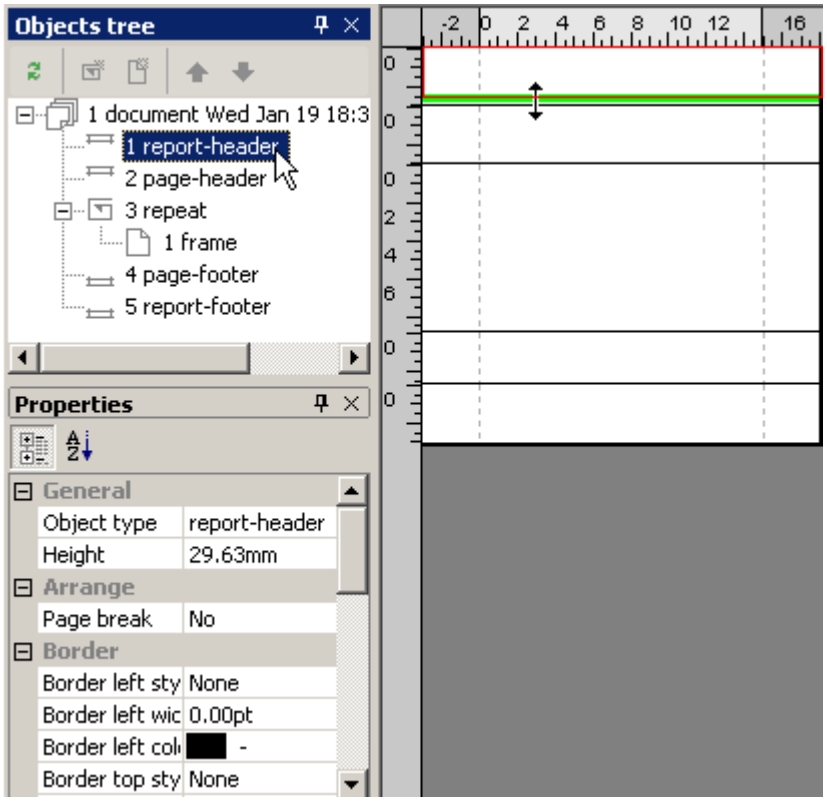
In the Objects tree window you will see that repeat object put under the document object and a frame object put under that.
In the layout pane one frame will be displayed with right and left margin.

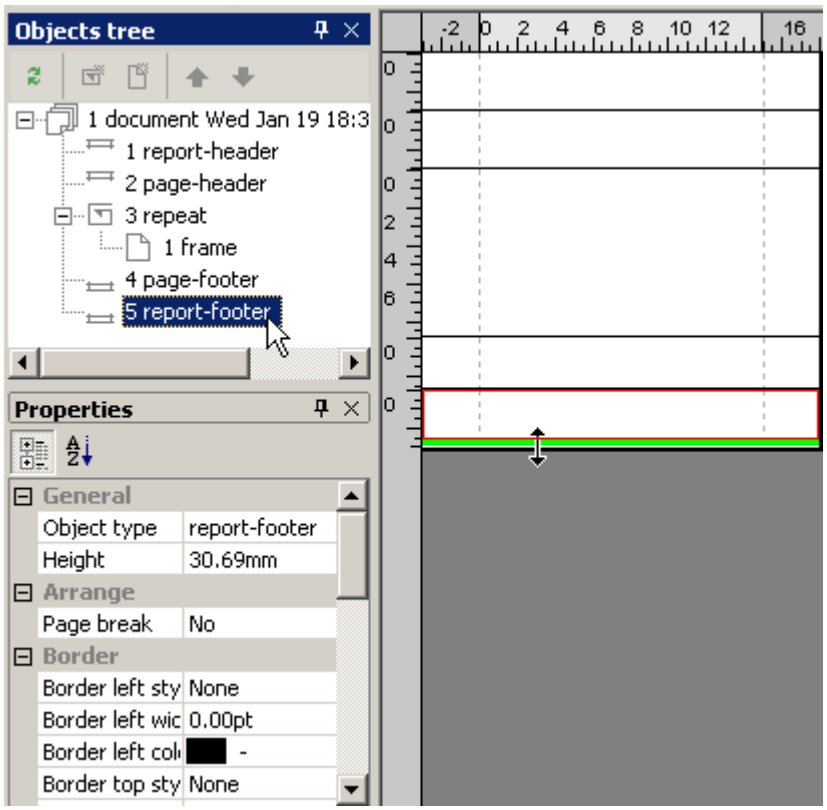


Report-header/report-footer object for Flow type

Refer to Report-header/report-footer object for Fixed type (page 133)

When you specify report header or report footer in Flow type they are displayed in the layout pane with the header at the top of the frames and the footer at the bottom of the frames. When printed the header will be at the beginning of the report and the footer will be at the end of the report. The report header and report footer can be printed on the same page as the body of the report or they can be printed on separate pages.





Properties for report-header/report-footer object:

■ General Properties

Refer to General Properties (page 135)

■ Arrange Property

Properties	Value	Description
Page break	Yes/No	Specifies whether to break the page at the end of the object for report header.

■ Border Properties

Refer to Border Properties (page 135)

■ Print Properties

Refer to Print Properties (page 135)

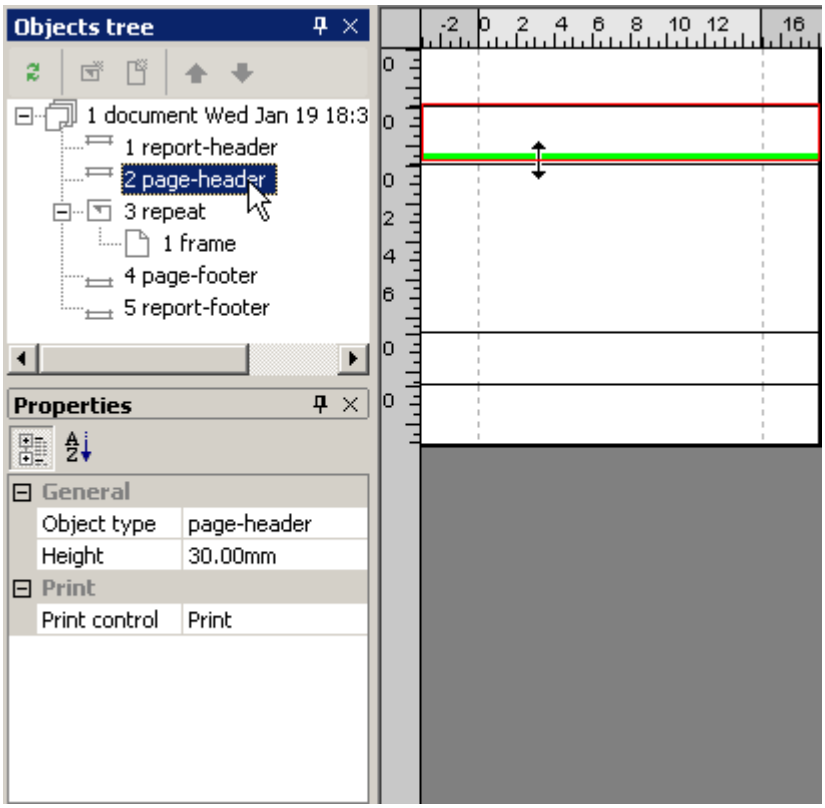
■ Page number Property

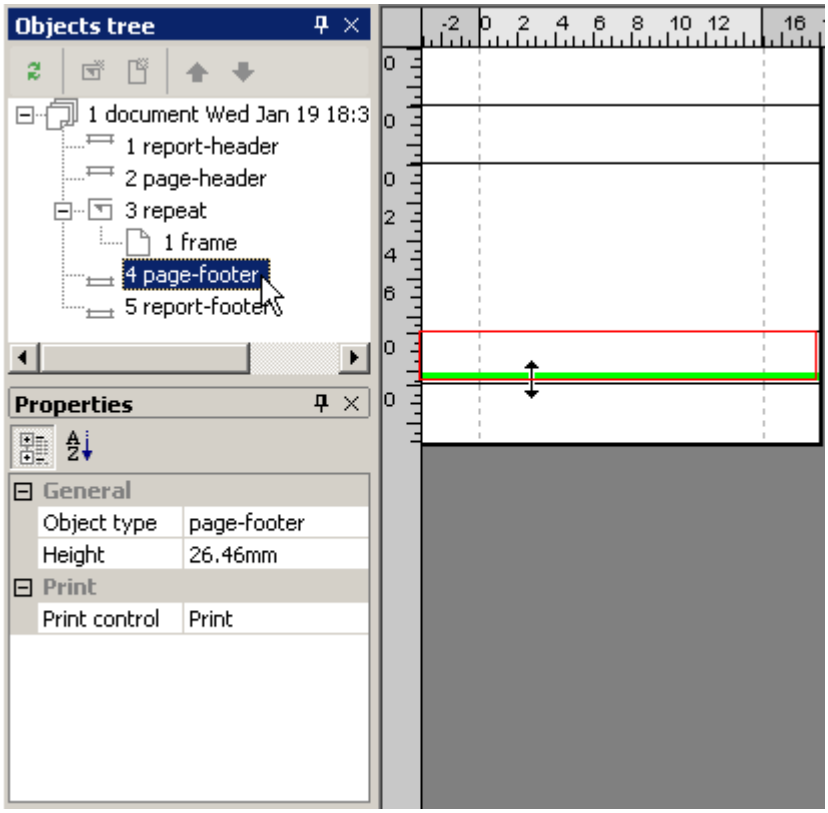
Refer to Page number Property (page 136)

Page-header/page-footer object for Flow type

Refer to Page-header/page-footer object for Fixed type (page 136)

When page header or page footer is specified for Flow type, they are displayed on the layout pane above and below the frame but before a report header or report footer. The features of the page header/page footer are the same as for the Fixed type layout.





Properties for page-header/page-footer object:

- General Properties

  Refer to General Properties (page 137)

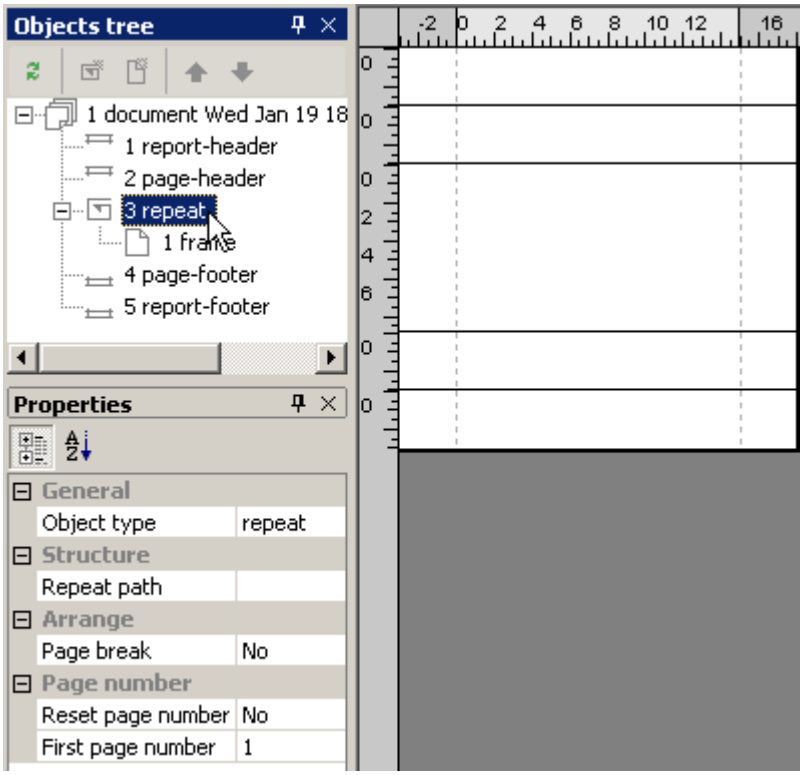
- Print Property

  Refer to Print Property (page 137)

Repeat object for Flow type

Refer to Repeat object for Fixed type (page 137)

Flow type project automatically has one repeat object, the main repeat.



In Flow type multiple repeat objects can be inserted using the Insert repeat of the Structure menu. The inserted repeat object becomes a sub repeat. In Flow type the layout can be designed to handle XML data that has repeating elements nested within repeating elements, nested repetitions.

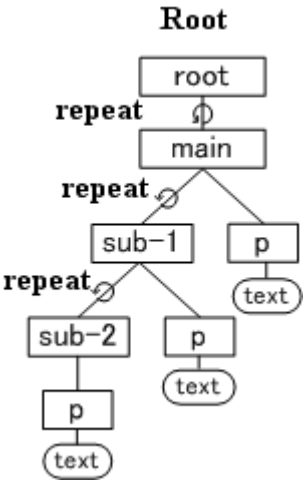
The following example illustrates handling XML data with nested repetitions.

```
<root>
 <main>
  <p>main (1)</p>
  <sub-1>
   <p>sub-1 (1)</p>
   <sub-2>
    <p>Sub-2 (1)</p>
   </sub-2>
   <sub-2>
    <p>Sub-2 (2)</p>
   </sub-2>
   <sub-2>
    <p>Sub-2 (3)</p>
   </sub-2>
  </sub-1>
  <sub-1>
   <p>sub-1 (2)</p>
   <sub-2>
    <p>Sub-2
```

```
 <main>
  <p>main (2)</p>
  <sub-1>
   <p>sub-1 (1)</p>
   <sub-2>
    <p>Sub-2 (1)</p>
   </sub-2>
   <sub-2>
    <p>Sub-2 (2)</p>
   </sub-2>
  </sub-1>
  <sub-1>
   <p>sub-1 (2)</p>
   <sub-2>
    <p>Sub-2 (1)</p>
   </sub-2>
  </sub-1>
```

```
 <main>
  <p>main (3)</p>
  <sub-1>
   <p>sub-1 (1)</p>
   <sub-2>
    <p>Sub-2 (1)</p>
   </sub-2>
  </sub-1>
  <sub-1>
   <p>sub-1 (2)</p>
   <sub-2>
    <p>Sub-2 (1)</p>
   </sub-2>
  </sub-1>
  <sub-1>
   <p>sub-1 (3)</p>
   <sub-2>
    <p>Sub-2 (1)</p>
```

Tree structure of XML

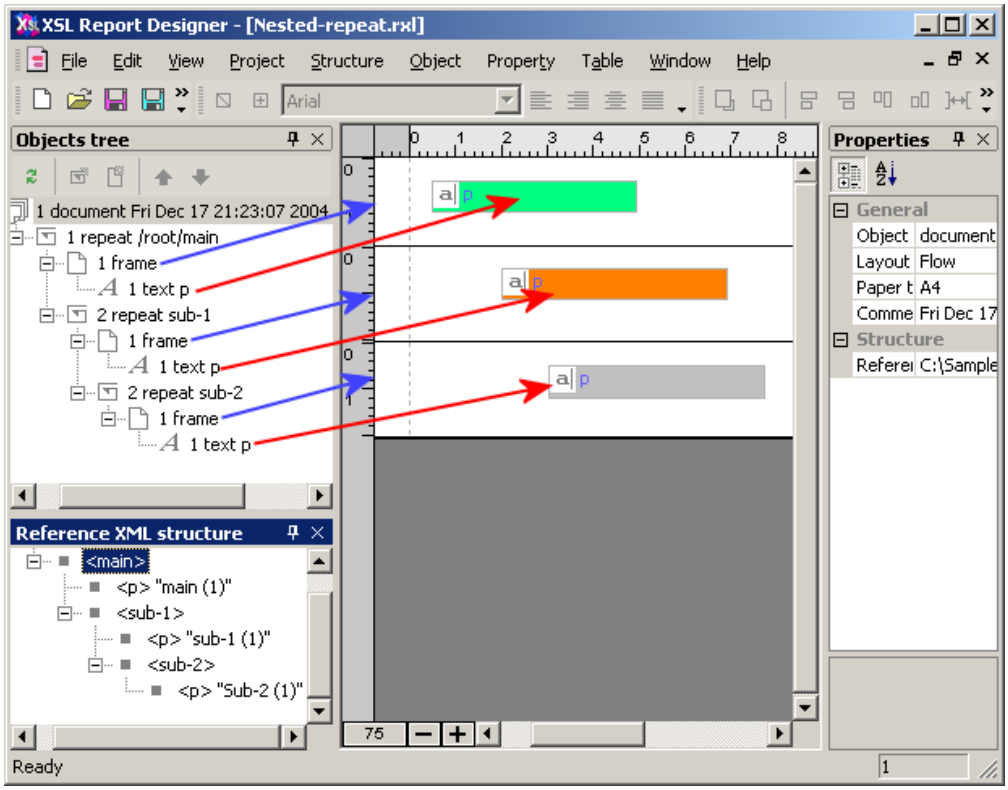


```
(1)</p>
   </sub-2>
  </sub-1>
  <sub-1>
   <p>sub-1 (3)</
p>
   <sub-2>
    <p>Sub-2
(1)</p>
   </sub-2>
  </sub-1>
 </main>
```

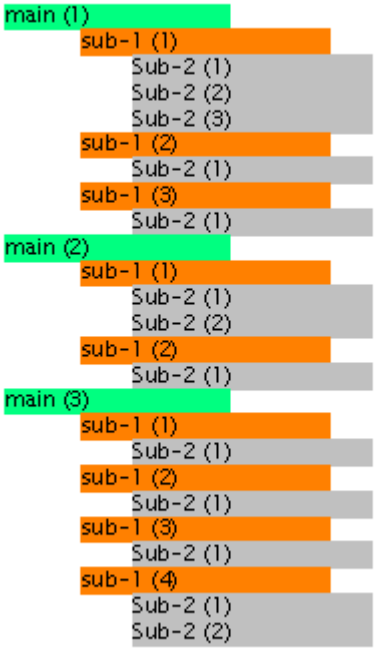
```
</main>
```

```
   </sub-2>
  </sub-1>
  <sub-1>
   <p>sub-1 (4)</
p>
   <sub-2>
    <p>Sub-2 (1)</
p>
   </sub-2>
   <sub-2>
    <p>Sub-2 (2)</
p>
   </sub-2>
  </sub-1>
 </main>
 </root>
```

XSL Report Designer is able to design a layout to support the nested repetition by arranging the repetitions in hierarchical order as follows:.



In this project the XML data previously shown would print as follows: You can see that the "main" element is repeated as main repeat. Inside of that is the repetition of "sub-1" element repeated several times and inside of sub-1 is the repetition of "sub-2" element.



The Repeat object is not displayed on the layout pane. Select "repeat" on the Objects tree window to display property in the Properties window.

Properties for repeat object:

- General Property

  Refer to General Property (page 139)

- Structure Property

  Refer to Structure Property (page 139)

- Arrange Property

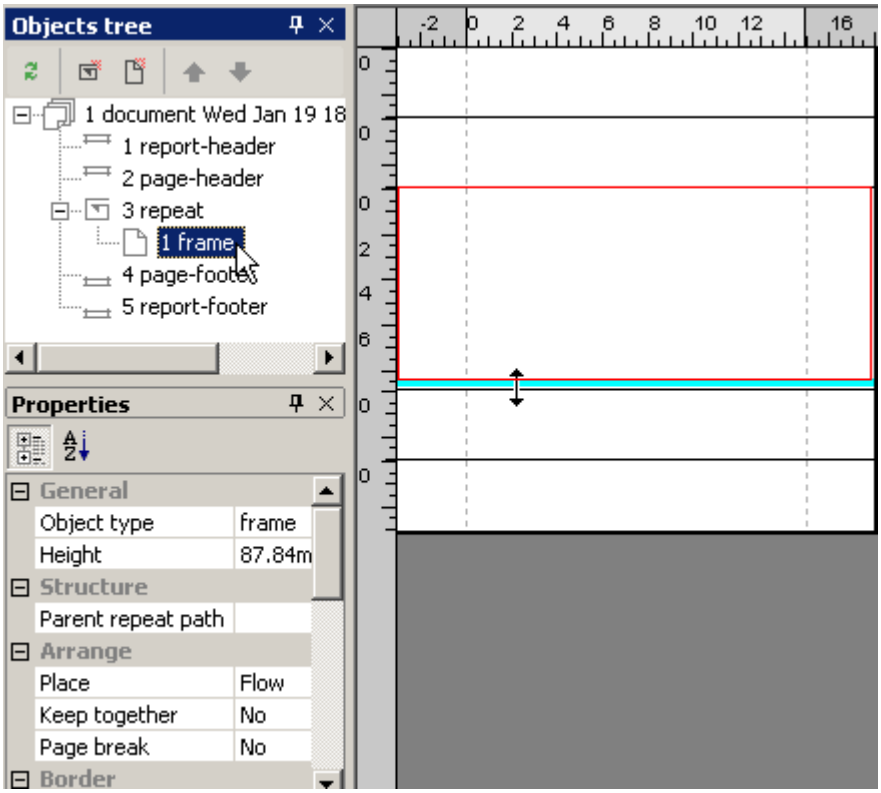
  Refer to Arrange Property (page 140)

- Page number Properties

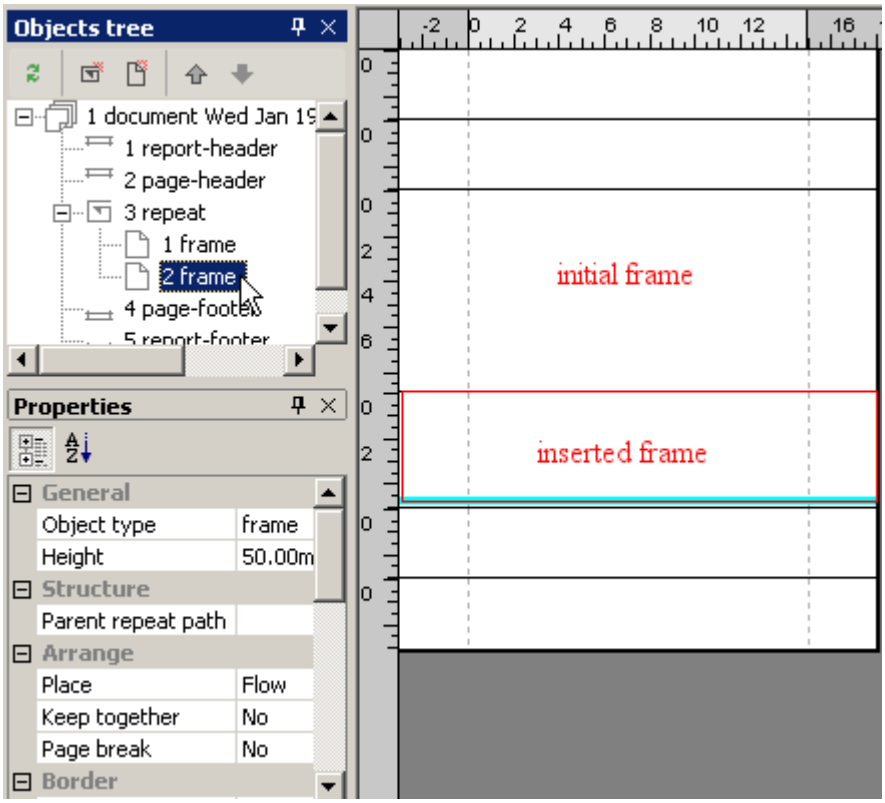
  Refer to Page number Properties (page 140)

Frame object

When frame object is selected in the Objects tree window a light blue line is displayed on the layout pane. Above the line is the frame object. The frame object corresponds to one frame area. Layout objects are arranged in this frame. Multiple frames can be sequentially added and additional objects can be grouped within the frames. However, frame objects cannot be put side by side.



Multiple frame objects can be inserted by Insert frame (page) of the Structure menu.



Properties for frame object:

■ General Properties

Properties	Value	Description
Object type	frame	Object type is frame object.
Height	Numeric value mm (millimeters) in (inches) pt (points)	It specifies the height of the frame. When the arrange property of the frame is set to "Fixed" the height of the frame is set at a fixed height. When set to "Flow," the height of frame will depend on the content of the layout objects. To change the height of a frame drag the light blue line under frame up and down. It is also possible to input an arbitrary numerical value for the Height in the Properties window. Please note that a new page of output will be automatically created when the combined height of the frame and the header is larger than the height of the body area (area inside the margins) on the page.

■ Structure Property

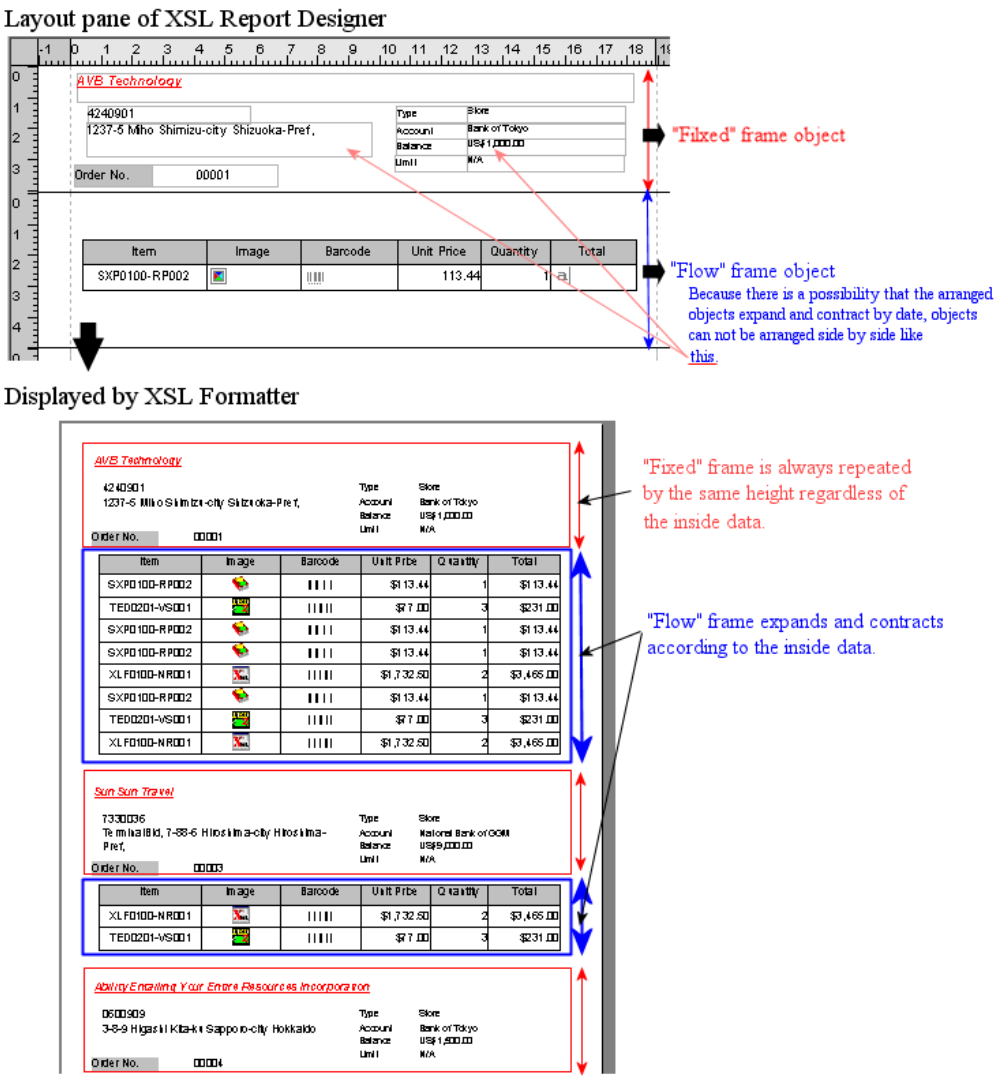
Properties	Value	Description
Parent repeat path	Path to the element of XML data to be printed	The repeat path set to the parent repeat is displayed. When the value is changed, it is reflected in the property of the repeat.

■ Arrange Properties

Properties	Value	Description
Place	Fixed/Flow	Used to set the arrangement of the frame objects. "Fixed" sets the height of the frame object by an absolute value from the top of the frame. The height of the frame does not change even if the length of the object expands beyond the specified height. When "Flow" is set, as the height of the object expands, the height of other objects and frames expands accordingly to accommodate the expanded object. If objects are placed horizontally in a frame it is not possible to apply Flow to the frame.
Keep together	Yes/No	Specifies whether to arrange objects in frame on the same page.
Page break	Yes/No	Specifies whether to break page at the end of the frame object.

Example of frame object arrangement

The following are examples of "Fixed" and "Flow" that can be set by the arrangement property of the frame object.



■ Border Properties

Refer to Border Properties (page 135)

19.3 Label type

In Label type the specified page is divided into user defined units called labels (label object) for formatting. The same output pattern is repeated label by label by starting each new label at the main repeat element.

The page length and width are divided into the specified number of units (number of labels widthwise and lengthwise) on the New project guide 2/3.

Output example of Label type

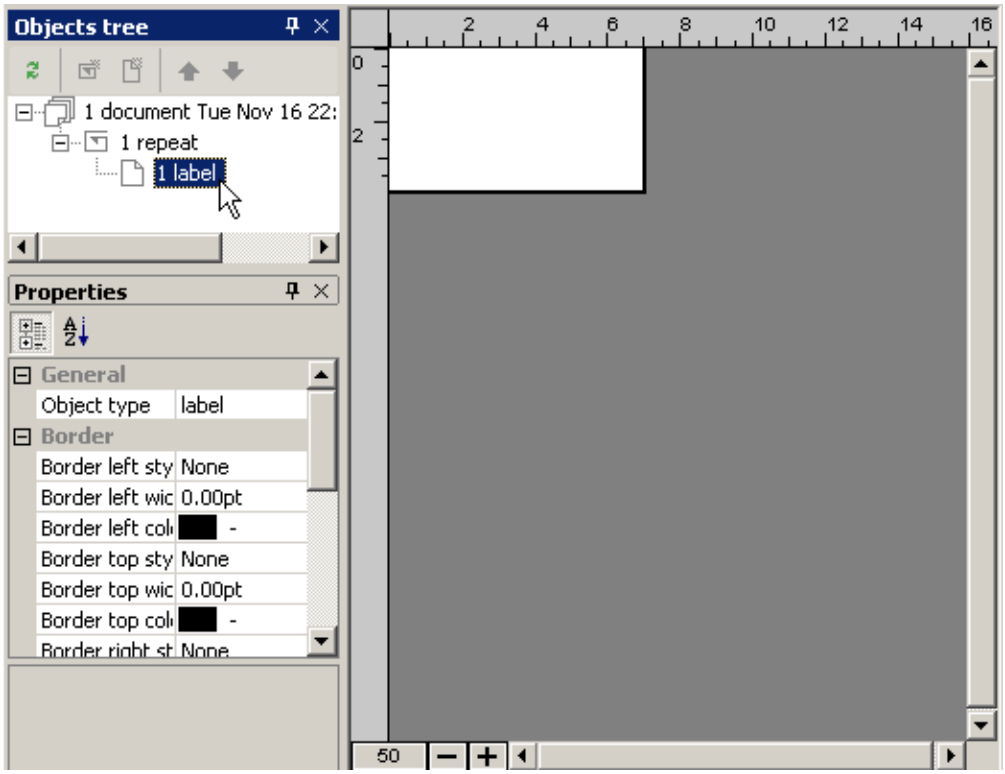
The Label type looks very similar to the Fixed type. A big difference is that Label type can divide the page vertically and horizontally into units and the object is arranged within one unit. It is used when multiple records are sequentially printed on one page.

The label object can be a fixed size and arranged at a fixed position. In Label type if the Report header/footer is specified it is always printed on a separate page. The label layout cannot be composed of multiple pages.

The first window for Label type

When Label type is specified one label is displayed in the layout pane. The objects are arranged in this area.

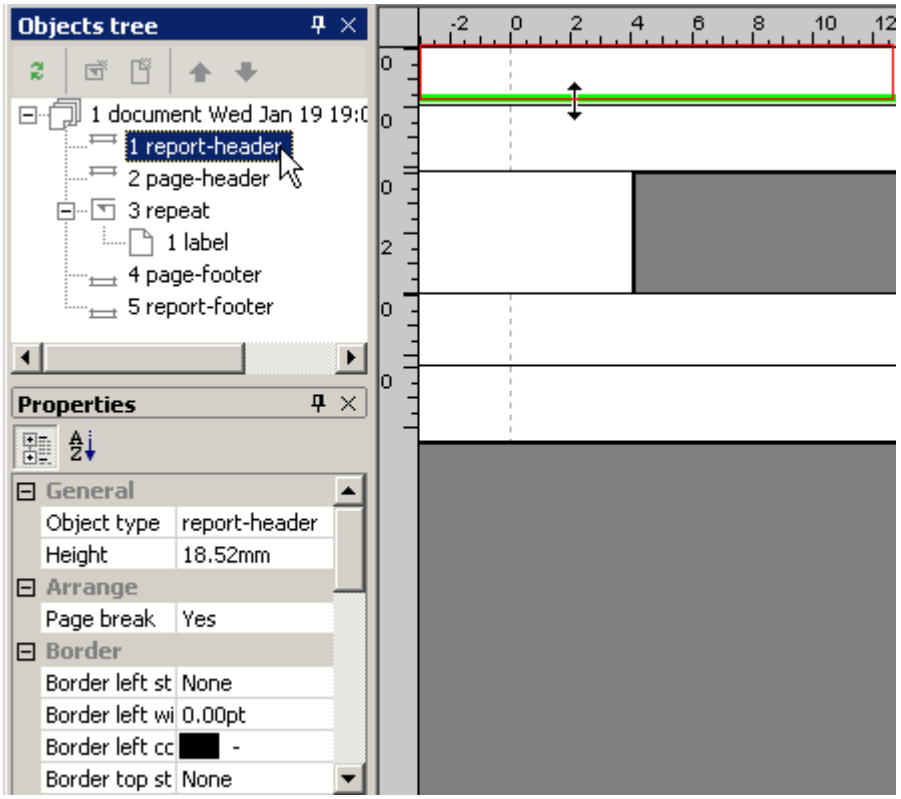
You will see repeat object is put under the document object and one label object is put under that in the Objects tree window..

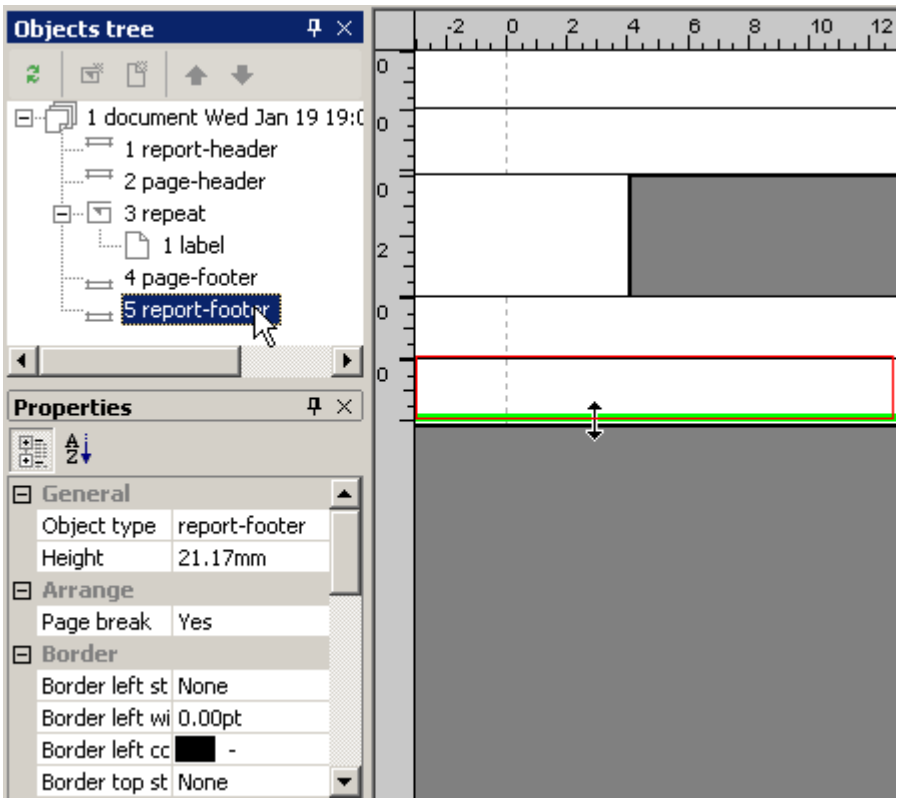


Report-header/report-footer object for Label type

Refer to Report-header/report-footer object for Fixed type (page 133)

When you specify report header or report footer in Label type, they are displayed above and below the label object in the layout pane.





Properties for report-header/report-footer object:

- General Properties

  Refer to General Properties （page 135 ）

- Arrange Property

  Refer to Arrange Property （page 135 ）

- Border Properties

  Refer to Border Properties （page 135 ）

- Print Properties

  Refer to Print Properties （page 135 ）

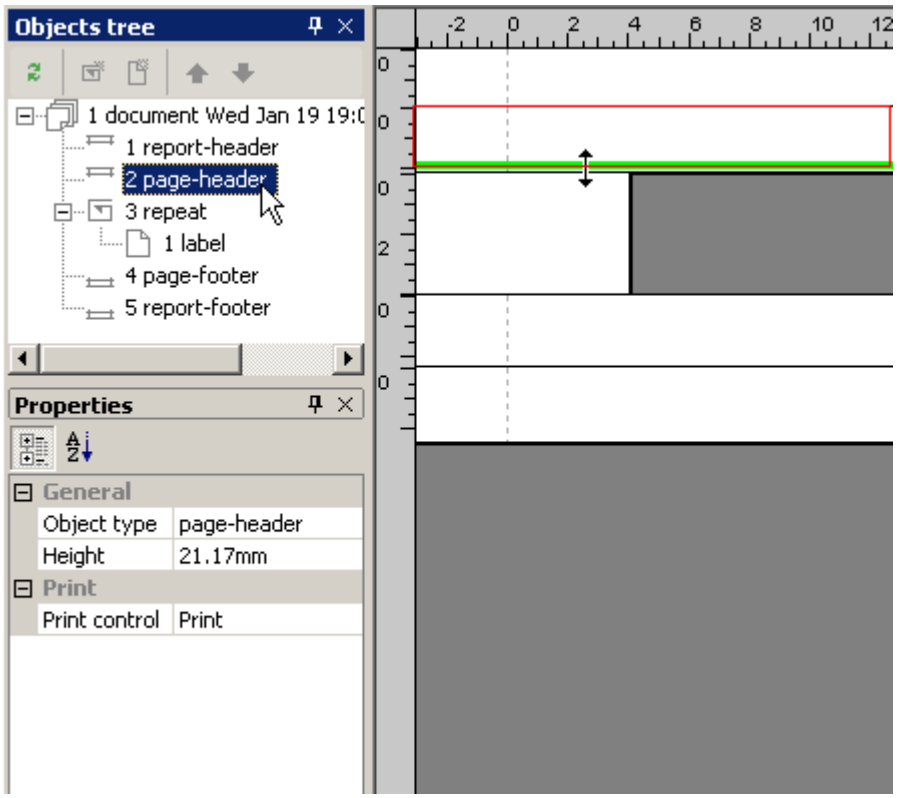
- Page number Property

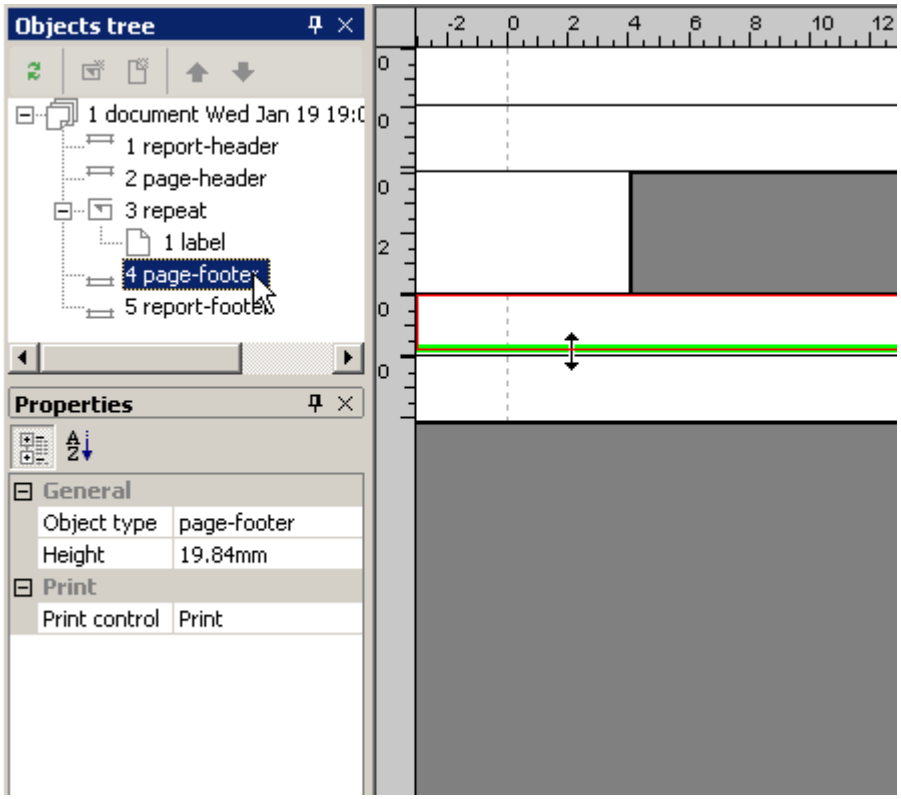
  Refer to Page number Property （page 136 ）

Page-header/page-footer object for Label type

Refer to Page-header/page-footer object for Fixed type （page 136 ）

When page header or page footer is specified for Label type, it is displayed on the layout pane as follows:





Properties for page-header/page-footer object:

- General Properties

  Refer to General Properties （page 137 ）

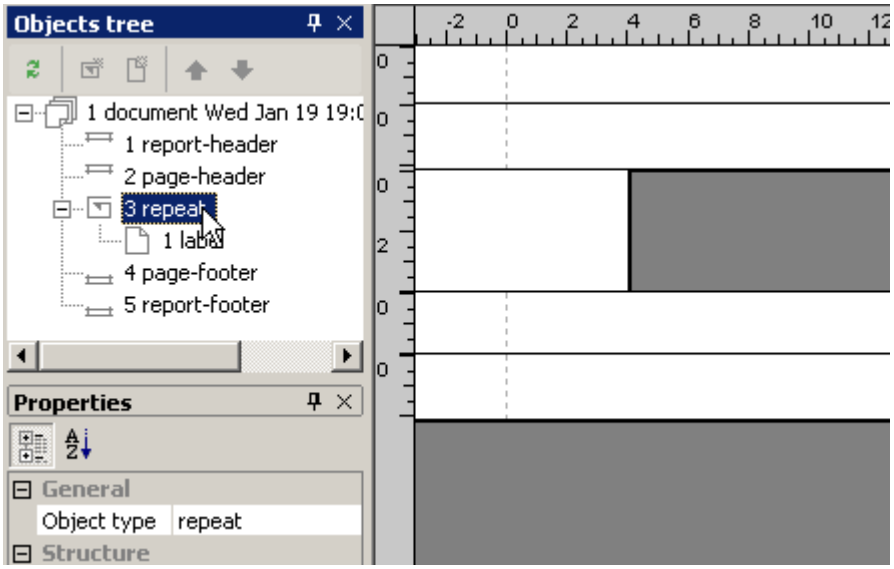
- Print Property

  Refer to Print Property （page 137 ）

Repeat object for Label type

Refer to Repeat object for Fixed type （page 137 ）

Label type has one repeat, the main repeat. Whenever the main repeat element set in the XML path appears one label object is output.



The Repeat object is not displayed on the layout pane and has to be selected on the Objects tree window to display property in the Properties window.

Properties for repeat object:

- General Property

  Refer to General Property (page 139)

- Structure Property

  Refer to Structure Property (page 139)

- Arrange Property

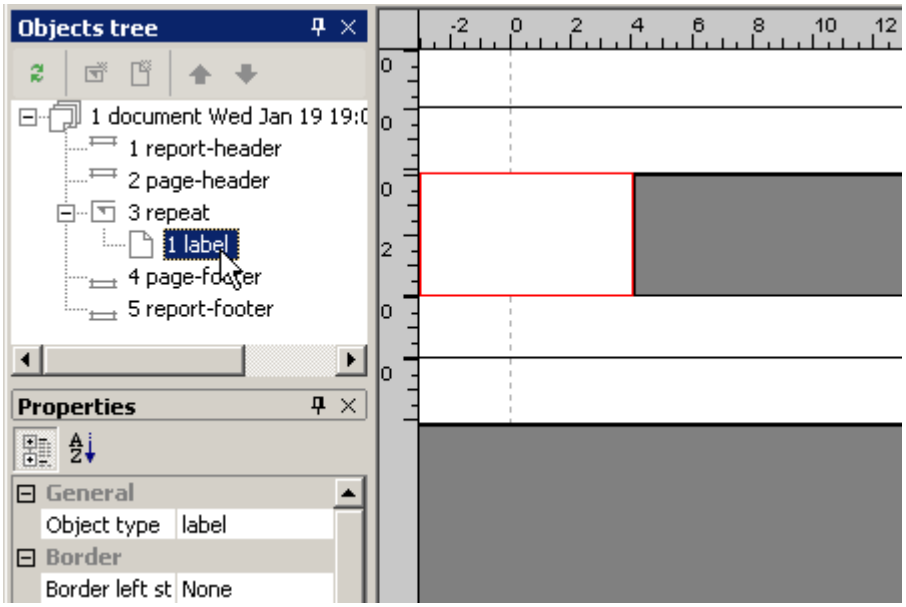
  Refer to Arrange Property (page 140)

- Page number Properties

  Refer to Page number Properties (page 140)

label object

Label object is only used when Label type is selected as the layout type. The paper is divided vertically and horizontally into label objects when the project is set and only one label object is displayed in the layout pane as the body area.



Properties for label object:

■ General Property

Properties	Value	Description
Object type	label	Object type is label.

■ Border Properties

Refer to Border Properties （page 135)

Objects for layout

This chapter explains how in a project to input and set each property of the layout objects. The objects are arranged in the page, frame and label. Refer to Properties list （page 206) for the detailed property information for each object.

20 Object and content for page, frame and label objects

After completing the initial project settings using the the New Project Guide and the reference file Report Designer is now ready to design the report by arranging the layout objects. The report is designed by using the following steps on the layout pane:

1. Arrange the layout object.
2. Set property for the object.
3. Input contents into the object.

By repeating the above steps till all objects are layed out you can make the report. The order of setting the property for the object and inputting the content can be reversed.

20.1 Objects that can be arranged

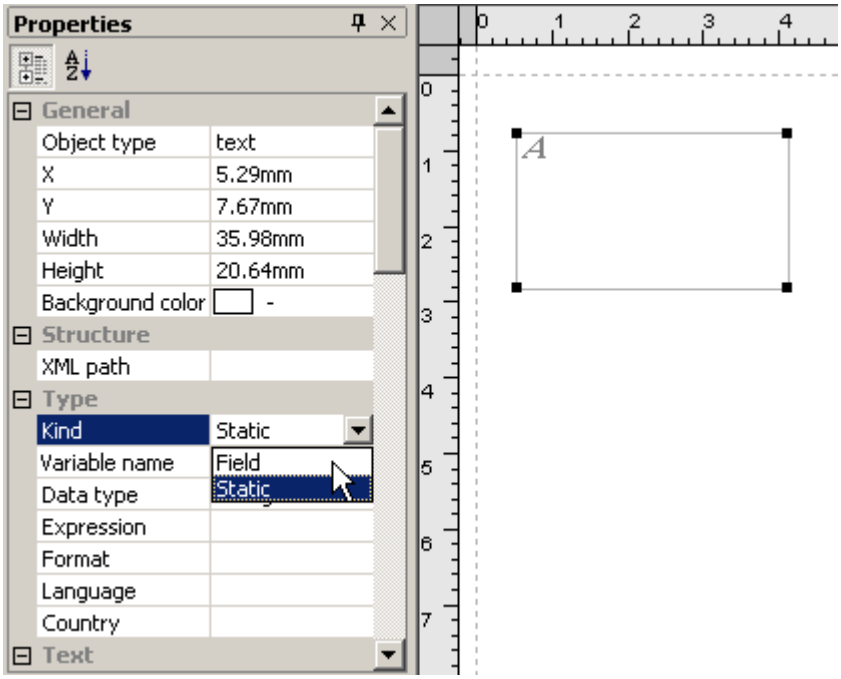
The following Objects can be arranged in page, frame and label objects.

Object name	Object type	Description	Operation
Text	text	The text object is used when arranging text and numeric values. The text or numeric content can be either directly input into the object or acquired from the XML data.	Example （page 173)
Image	image	The image object is used when arranging an image. The image content can be either directly input into the object or acquired from the XML data.	Example （page 183)
Barcode	barcode	The barcode object is used for arranging barcodes. The barcode content can be either directly input into the object or acquired from the XML data.	Example （page 187)
Table	table	The table object is used when a table is used to arrange text, image and barcode objects.	Example （page 190)
Line	line	The line object is used when placing a single horizontal or vertical line on the layout. The line can be solid, hatched, etc.	Example （page 202)

- In the Properties window under General the Object type is displayed.
- Table objects contain caption, column-info, table-header, table-footer, table-body, table-rows and table-cells.

20.2 Property settings

Property settings are made by selecting the target object on the layout pane to display the associated properties in the Properties window or the Property menu.

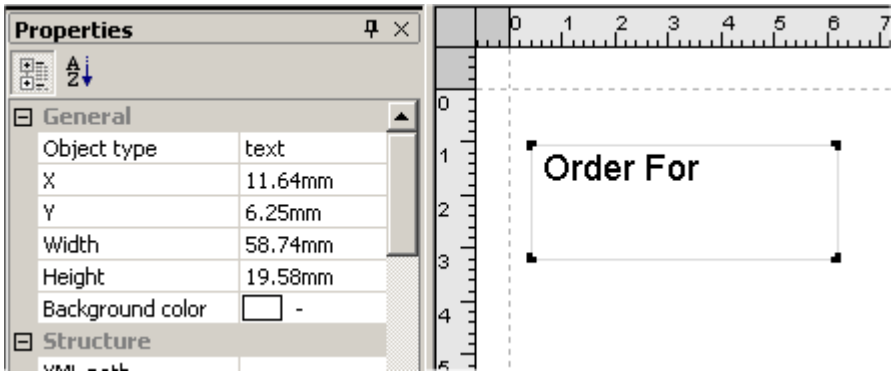


The Properties that can be set for each object are different. For the different properties refer to the following explanations and the Properties list (page 206).

20.3 Inputting the content

The input content of each object is arranged according to the usage. The following two methods can be used to input content to text, image and barcode objects:

- Direct Input with XSL Report Designer
  The content is input directly into the object on the layout pane. By double clicking on a text object you can then type directly into the object.



- Acquire and embed the content from XML data
  By setting the path to an element in the XML data to be printed (this is called "XML path") and then embedding the XML data. (Refer to the next section.)

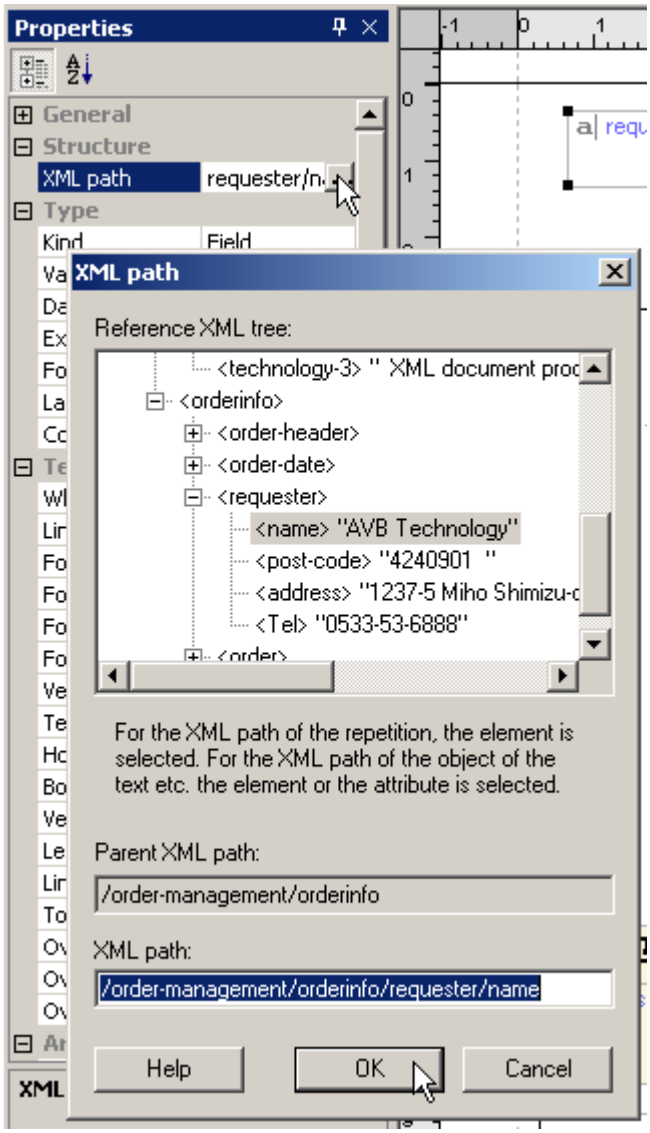
21 Property settings for acquiring content from XML data

21.1 Properties that refer to XML data

When content is acquired from XML data and placed in an object, which element of the XML data is acquired is decided by setting the following properties:

Properties	Value	Description
Kind	Static	Static content is input directly on the layout pane and is not acquired from XML data. It can be a text string, a numeric value, an image or a barcode.
	Field	The content is acquired from XML data. The path to the element of XML data (XML path) is set and the data specified by the XML path is embedded. The object type can be text, numeric value, image, barcode and caption.
XML path	XML path	Specify which part of the XML data to embed as content. Becomes effective when Property Kind is set to Field.

To acquire content from XML data select Property Kind Field and set XML path to the XML data to be input into the report. When you click "XML path" in the Properties window, you will see the tree display of elements which are descendent elements of the element set as "Repeat XML path" in the Project setup dialogue. Then, choose the element that is to input in each object.



21.2 Use of expression

Data can be further processed or formatted for output by applying an expression to the content acquired from the XML data.

Properties	Value	Description
Variable name	arbitrary	Sets a variable name for an object. The name can then be referred to by expressions in the project.
Data type	String/Number/Currency/Date	Select the type of the text data according to the content as either "String," "Number," "Currency" or "Date."
Expression	Built-in Function list	Set the expression when processing is necessary to obtain the embedded data.
Format	Conforms to Java. Number, Currency, Date	Specify the format for "Number," "Currency" or "Date" set in the data type property.

Language	Conforms to the language codes	Set language information is used to decide format.
Country	Conforms to the country codes	Set country information is used to decide the format.
Property expression	Built-in Function list	Sets the property expression when dyanamic property changes are needed.

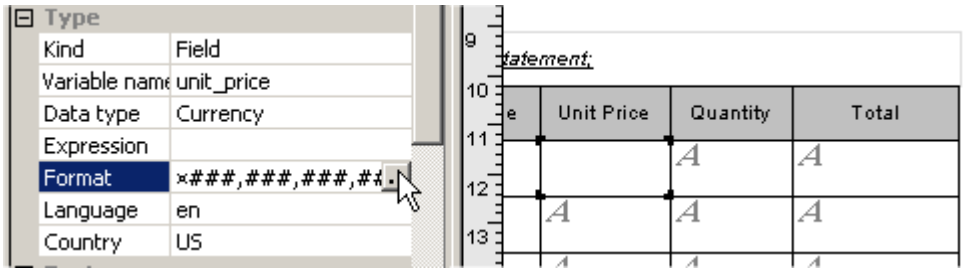
By using the expression function you can easily set a complex expression, the date, the page number, automatic formatting and so on. Refer to the Built-in Functions (page 220) for the available expressions.

Example of using expression

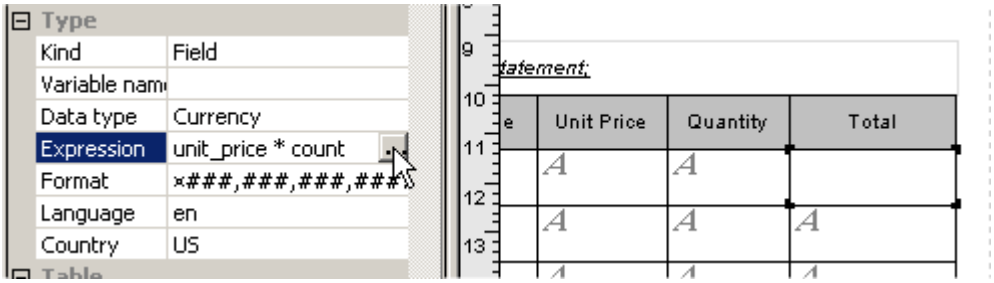
Order Statement:

Item	Image	Barcode	Unit Price	Quantity	Total
SXParser Ver 1.0			$113.44	1	$113.44
TagEditor Ver 2.1			$77.00	3	$231.00
SXParser Ver 1.0			$113.44	1	$113.44
SXParser Ver 1.0			$113.44	1	$113.44
XSL Formatter Ver 1.0			$1,732.50	2	$3,465.00
SXParser Ver 1.0			$113.44	1	$113.44
TagEditor Ver 2.1			$77.00	3	$231.00
XSL Formatter Ver 1.0			$1,732.50	2	$3,465.00
Final Total				14	$7,845.76

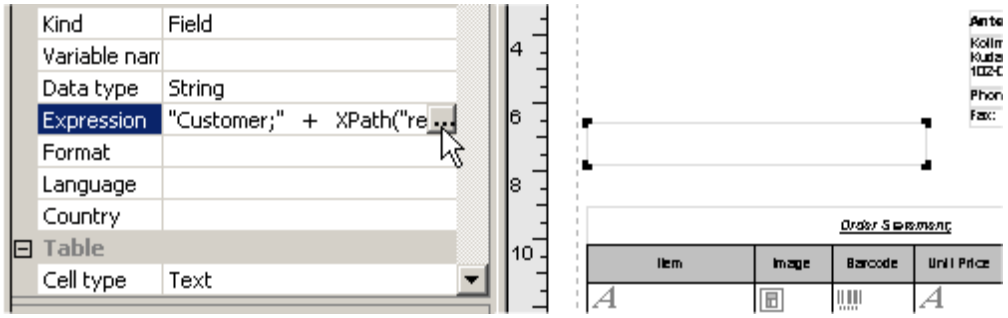
For these cells expressions have been used to set the method for displaying the numbers, for calculating the total and for summing the columns.
For instance, "Variable name" and "Format" are specified for the property of the "Unit price" cell.



Also, the property of the "total" cell is displayed by using the "Variable names" specified for "unit price" and "Quantity" by the expression.

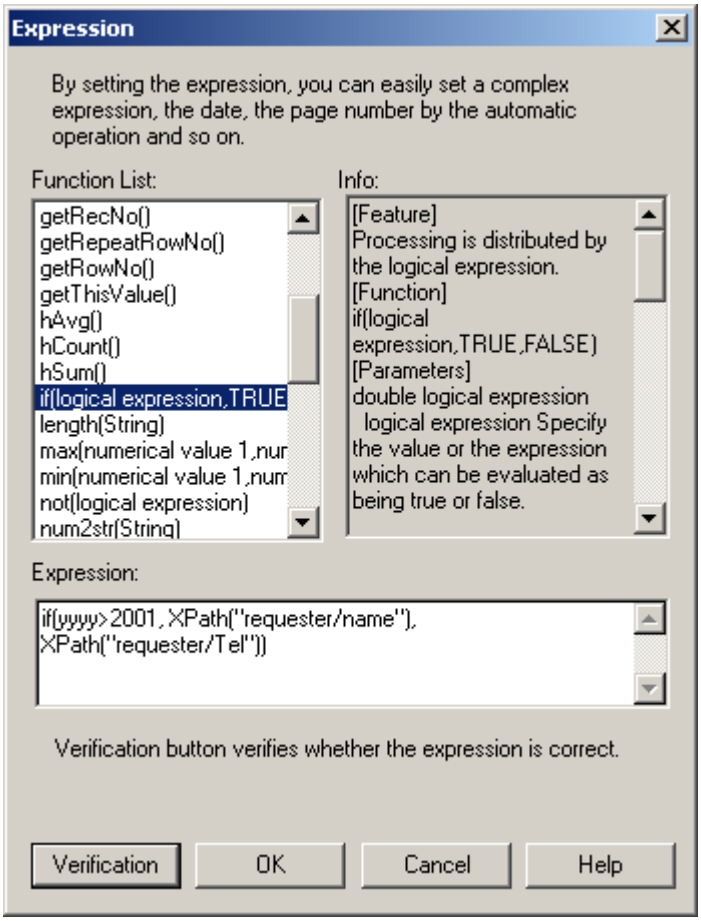


In the following, "XPath" function is used.

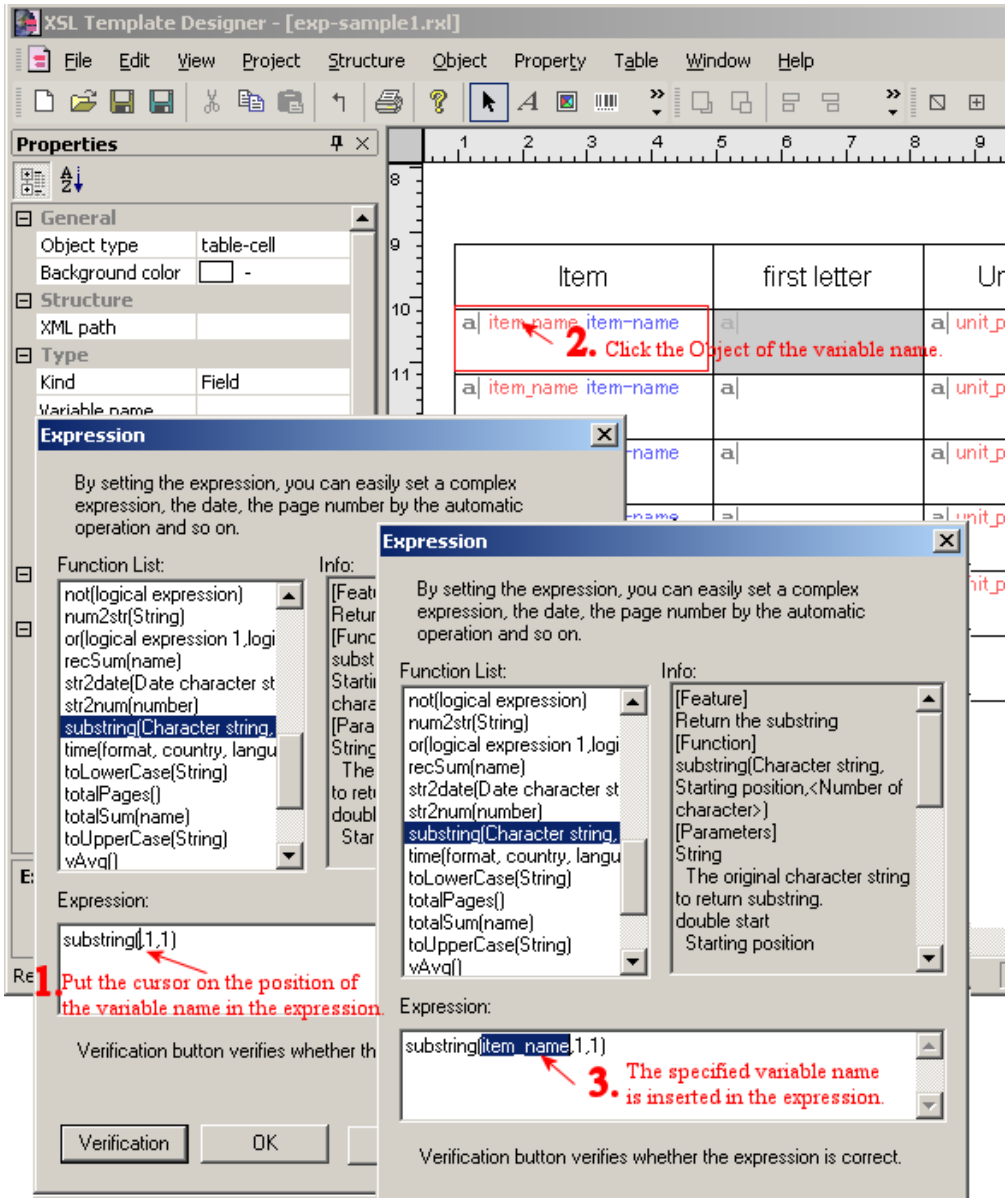


Expression Input

By clicking on Expression in the Properties window the Expression dialogue window is opened for inputting the expression. Once the Expression is input the Verification button can be used to check whether the expression is correct.



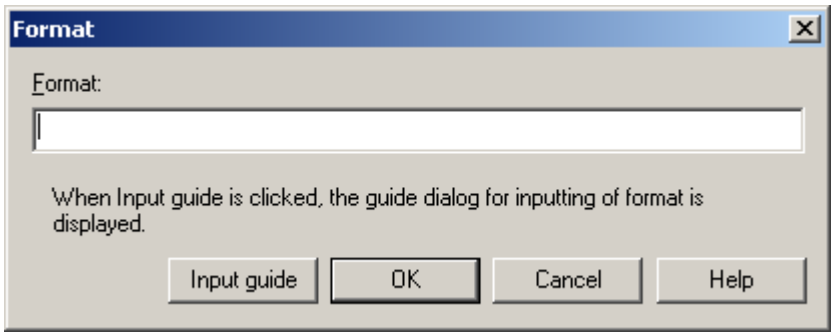
In an expression the variable name can only be set by opening the dialogue of the expression and clicking the object of the variable name to be inserted.



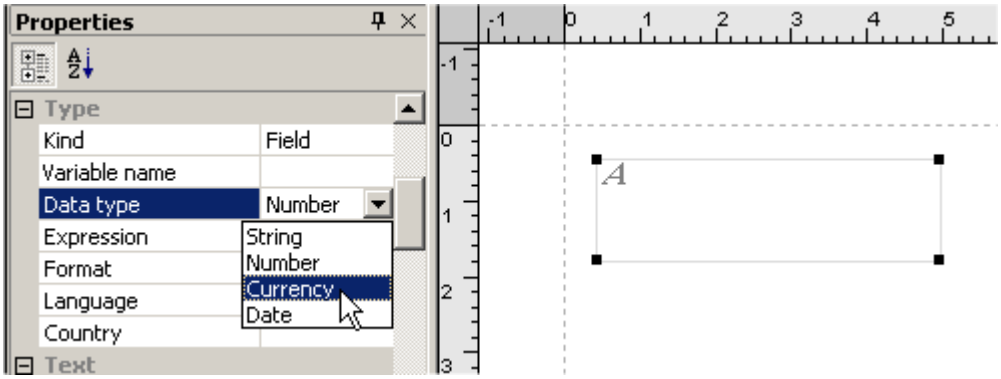
It is also possible to insert the XML path in the expression.

Format input guide

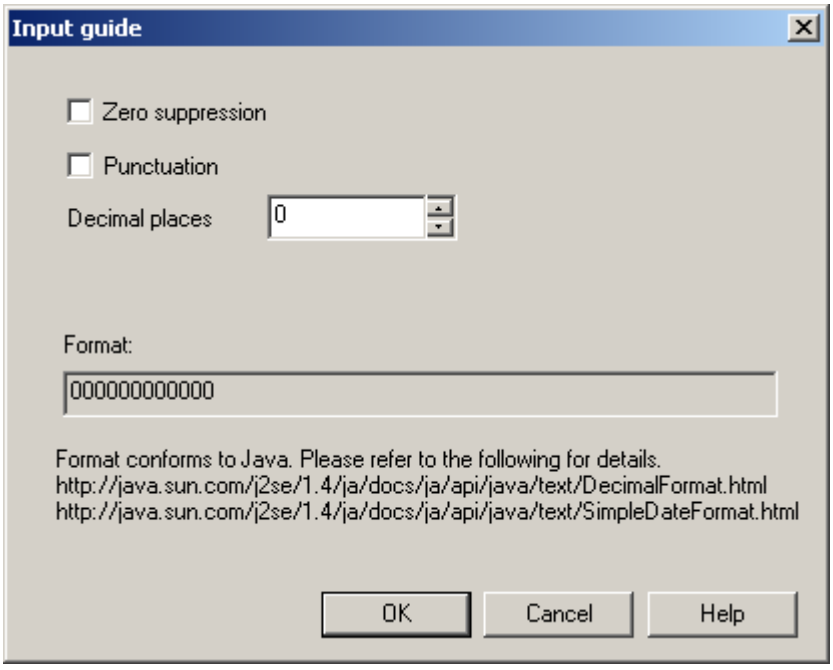
By clicking on Format in the Properties window the Input guide button for inputting the format is displayed.



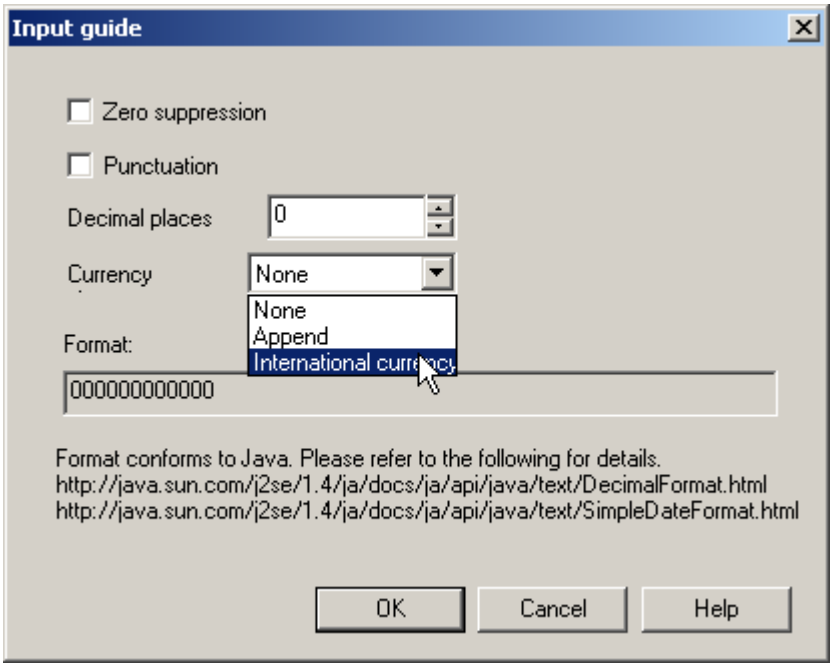
The dialogue of the Inupt guide depends on the Data type. The format cannot be specified when the Data type is "String."



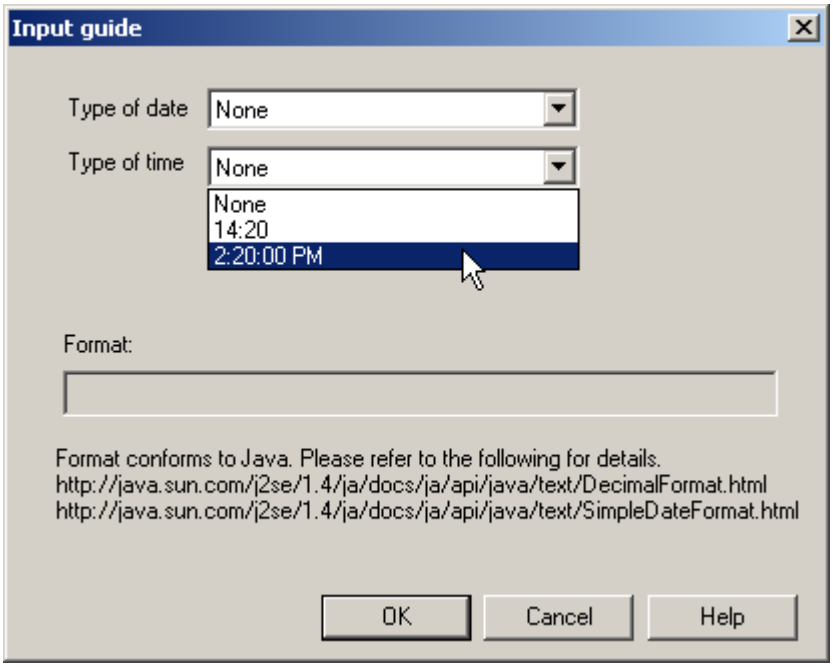
For "Number"



For "Currency"



For "Date"



Format

The Format conforms to Java specifications. Please refer to the following for details.
Class DecimalFormat (for decimal numbers)、 Class SimpleDateFormat (for date)

Data type	Format	
Number / Currency	0	Digit
	#	Digit, zero shows as absent.

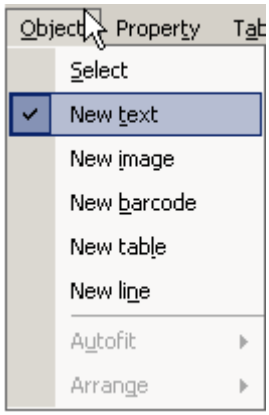
	.	Decimal separator or monetary decimal separator
	-	Minus sign
	,	Grouping separator
	E	Separates mantissa and exponent in scientific notation. Need not be quoted in prefix or suffix.
	%	Multiply by 100 and show as percentage.
	u+2030	Multiply by 1000 and show as per mille.
	u+00a4	Currency sign, replaced by currency symbol. If doubled, replaced by international currency symbol. If present in a pattern, the monetary decimal separator is used instead of the decimal separator.
Date	G	era designator
	y	year
	M	month in year
	w	week in year
	W	week in month
	D	day in year
	d	day in month
	F	day of week in month
	E	day in week
	a	am/pm marker
	H	hour in day (0~23)
	k	hour in day (1~24)
	K	hour in am/pm (0~11)
	h	hour in am/pm (1~12)
	m	minute in hour
	s	second in minute
	S	millisecond
	z	time zone
	Z	time zones in RFC822 format

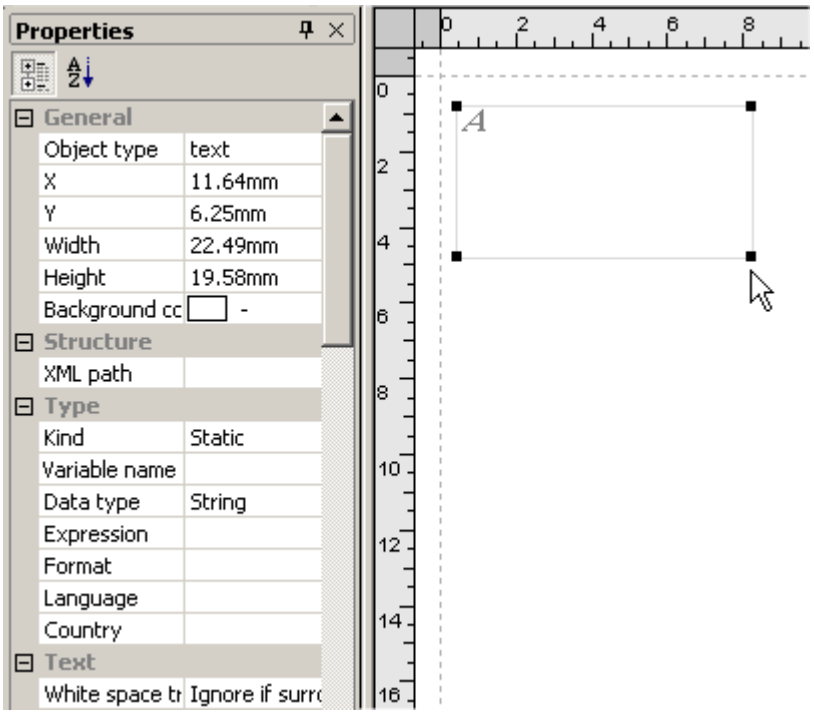
Language	Conforms to "Language codes" defined in ISO 639. Please refer to the following for details. ISO 639/Joint Advisory Committee (ISO 639/JAC)
Country	Conforms to "Country codes" defined in ISO 639. Please refer to the following for details. ISO 3166 Maintenance agency (ISO 3166/MA) - ISO's focal point for country codes

22 Property settings for each object

22.1 Text object

New text objects can be placed on the layout pane by selecting New text from the Object menu and by making an object frame with the mouse on the layout pane.





The Kind of text object is displayed inside the top left corner of the object frame. A is for "Field" and a is for "Static."

Properties	Value	Description
Object type	text	Type of object is text.

General Properties

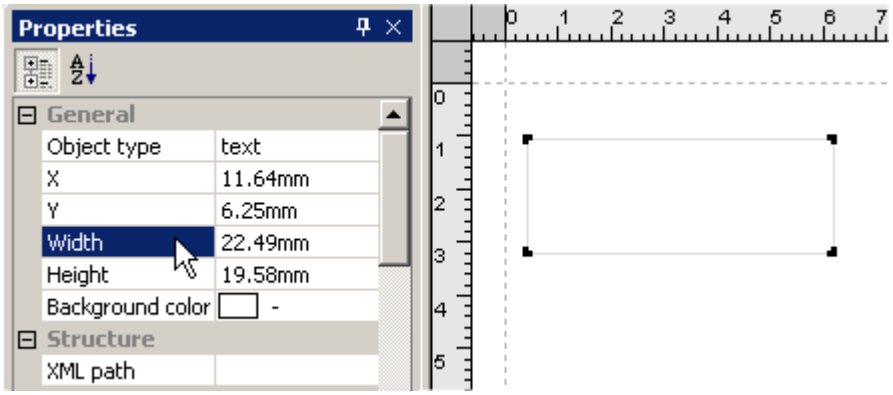
Set the size, position and background color of the object.

Properties	Value	Description
X	Numeric value (mm/in/pt)	Set X coordinates for the object. When a margin is displayed the X coordinate is measured from the from the left margin. If no margin is displayed it is measured from the left edge of the page, frame or label.
Y	Numeric value (mm/in/pt)	Set Y coordinates for the object. When a margin is displayed the Y coordinate is measured from the from the top margin. If no margin is displayed it is measured from the top edge of the page, frame or label.
Width	Numeric value (mm/in/pt)	Set the width of the object.
Height	Numeric value (mm/in/pt)	Set the height of the object.
Background color	Hexadecimal RGB value starting with #, or W3C color name.	Set the background color of the object area defined by the rectangle.

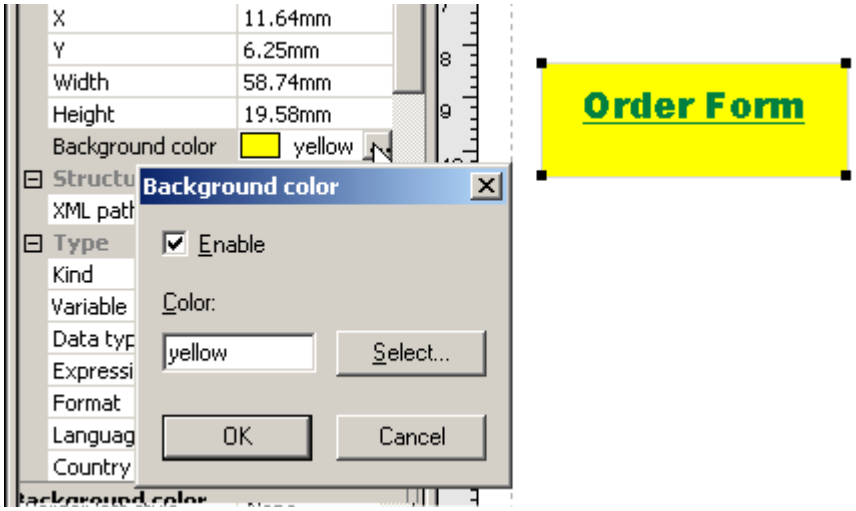
The object's position and size can be controlled in the layout pane with the mouse. When the mouse is used the values of X coordinates/Y coordinates/width/height of the object will automatically be reflected in the Properties window. The numerical values can also be changed in the Properties window.

Color can be applied to the background of the text object area.

Example of setting size of object



Example of setting background color



Structure Properties

Used to specify the XML path for the reference XML data.

Properties	Value	Description
XML path	Path to the element of the reference XML data	Specifies which part of the XML data to embed. Effective when Kind property is set to "Field."

Refer to Properties that refer to XML data (page 164) for a concrete input of XML path.

Type Properties

Set Type Properties of object; "Kind," "Value Name," "Data type," "Expressions," "Format," "Language" and "Country."

Properties	Value	Description
Kind	Field/Static	Select the type of data in text object from "Field" or "Static." When "Field" is selected the data specified by XML path is embedded.
Variable name	arbitrary	Used to set a name to the object. The name set here can be referred to by expressions in the project.
Data type	String/Number/Currency/Date	Select the type of the text data according to the content at "String," "Number," "Currency" or "Date."
Expression	Built-in function list	The expression is set when its necessary to further process the embedded data.
Format	Uses Java conventions for Number, Currency, Date	Specify the format for "Number," "Currency" or "Date" as set in the data type property.
Language	Conforms to the language codes	Set language information used to control the formatting.
Country	Conforms to the country codes	Set country information used to control the formatting.

Refer to Use of expression (page 165) for further information about expressions.

Text Properties

Properties that control text and character formattering in the object. Also, controls line and paragraph formats.

Properties	Value	Description
White space treatment	Ignore/ Preserve as white space/ Ignore if before linefeed/ Ignore if after linefeed/ Ignore if surrounding linefeed	"Ignore" ignores white space. "Preserve as white space" puts the space in at the code position of the white space. "Ignore if before linefeed" ignores the space before the linefeed code. "Ignore if after linefeed" ignores the space after the linefeed code. "Ignore if surrounding linefeed" ignores the blank before and behind the linefeed code.

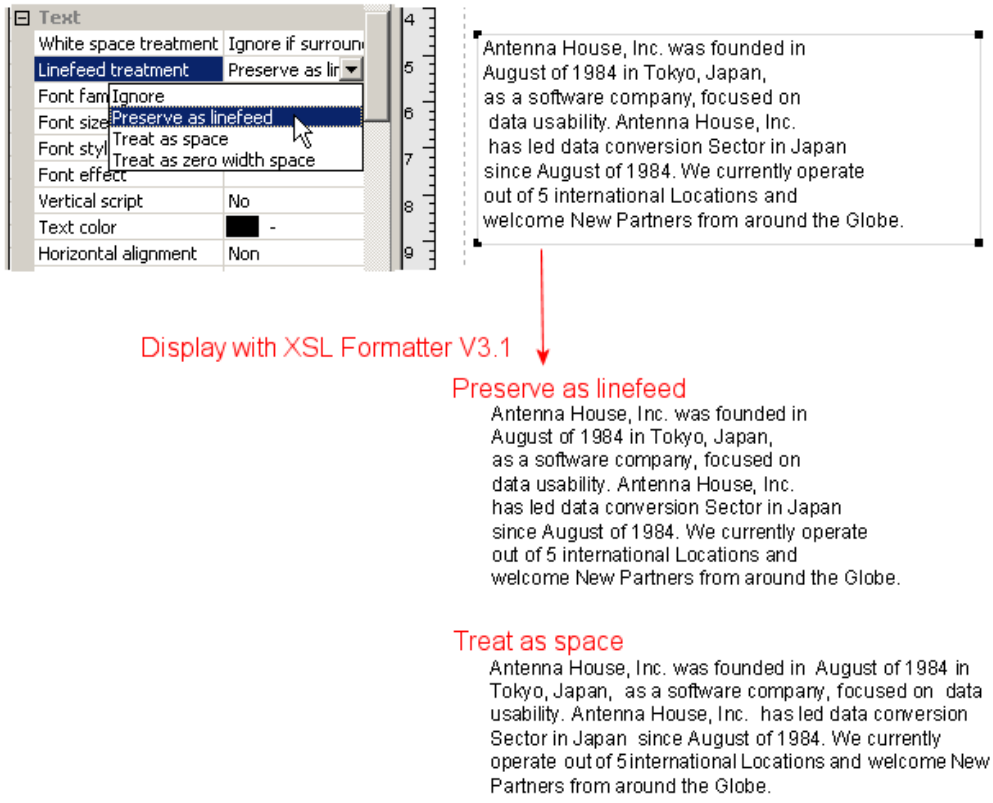
Linefeed treatment	Ignore/ Preserve as linefeed/ Treat as space/ Treat as zero width space	"Ignore" ignores linefeed. "Preserve as linefeed" changes line at the linefeed code position. "Treat as space" treats the linefeed code as a space. "Treat as zero width space" treats the linefeed code as a zero width space.
Font family	Select from the list	The font family is set by the font setting dialog. Each value set by this dialog is reflected in "Font size," "Font style" and "Font effect" property.
Font size	Numeric value (pt)	Font size is set.
Font style	Select from the list	Font style is set by the font setting dialogue.
Font effect	Select from the list	Font effect is set by the font setting dialogue.
Vertical script	Yes/No	Sets vertical writing direction.
Text color	Hexadecimal RGB value starging with #, or W3C color name.	Sets text color.
Horizontal alignment	Left/Right/Center/	Sets how the string is arranged horizontally in the rectangular area of the object.
Bottom line alignment	Left/Right/Center/	Sets the Horizontal alignment of last line in the object.
Vertical alignment	Top/Middle/Bottom	Sets how the string is arranged vertically in the rectangular area of the object.
Letter spacing	Numeric value (mm/in/pt)	Sets letter spacing.
Line height	Numeric value (mm/in/pt)	Sets the line height.
Top line indent	Numeric value (mm/in/pt)	Sets the amount of indent for the first line.
Overflow	Hidden/Replace/Condense	Sets how to handle overflow when the text exceeds the display area. Is effective when the Auto grow property is set to "No." "Hidden" does not print the overflowing data. "Replace" prints the character string set in "Overflow replace." The Overflow character string is embedded repeatedly

		until the area is filled. "Condense" condenses according to the method set in "Overflow condense."
Overflow replace	arbitrary	Specifies the replacement characters for "Replace" in the Overflow property.
Overflow condense	Condense font size/ Condense letter spacing/ Condense word spacing/ Condense font stretch/ Condense line height/ Auto	Sets the processing for "condense" in "Overflow." "Condense font size" adjusts font size to condense. "Condense letter spacing" adjusts character space to condense. "Condense word spacing" adjusts word space to condense. "Condense font stretch" adjusts font stretch to condense. "Condense line height" adjusts line height to condense. "Auto" depends on the default of the system.

The following are some examples.

Linefeed and space in the frame

Specifies how linefeed and white space in the frame are treated.

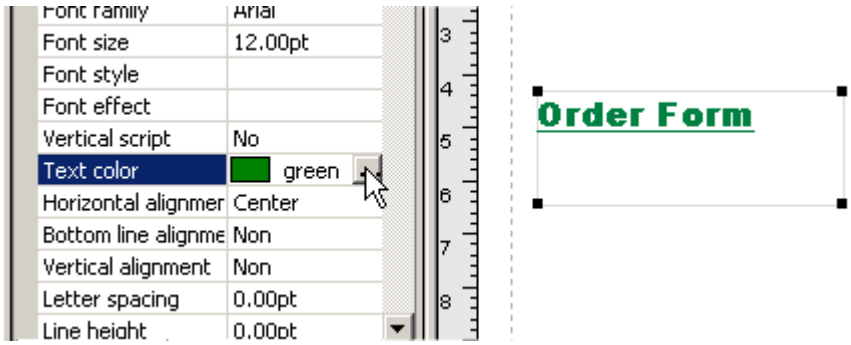


Font effect

Font dialogue opens by selecting a text object in the layout pane and then clicking each property regarding font in the Properties window. The font, size, color, style and effect are set here.

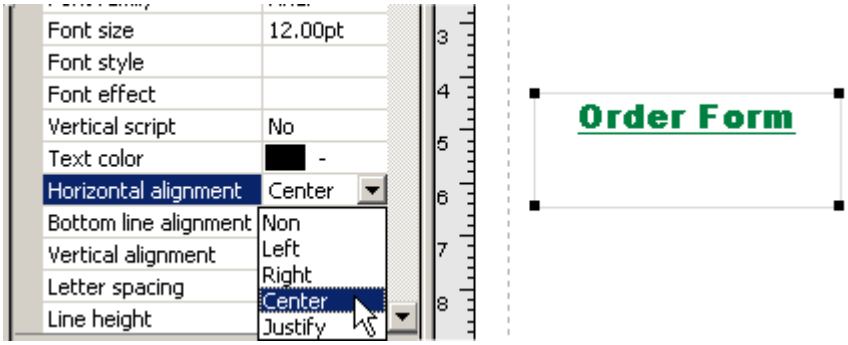
Clicking Text color opens the Color dialogue to set the color for the text.

To specify these properties for text in table cells select the "table-cell" object in the objects tree.



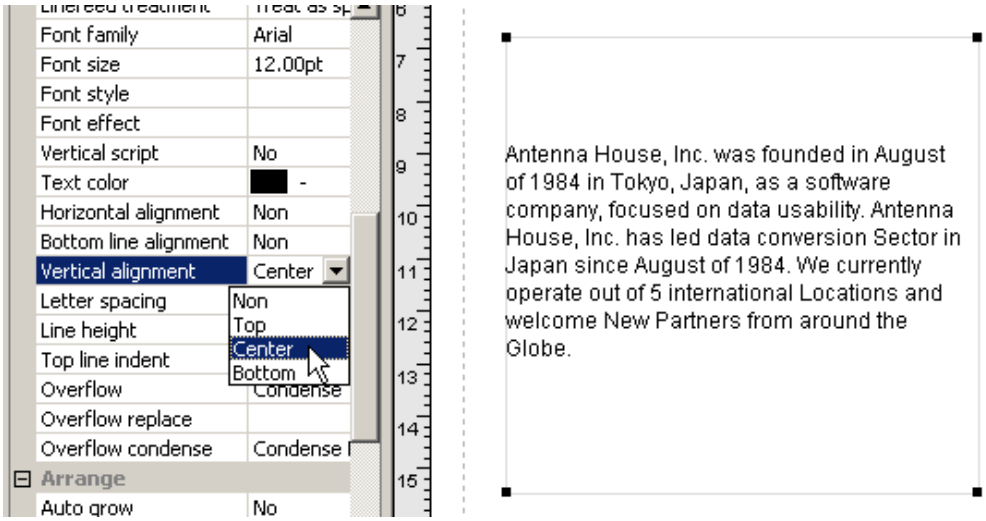
Text Aligment

Sets how the string is arranged horizontally in the rectangular area of the object.



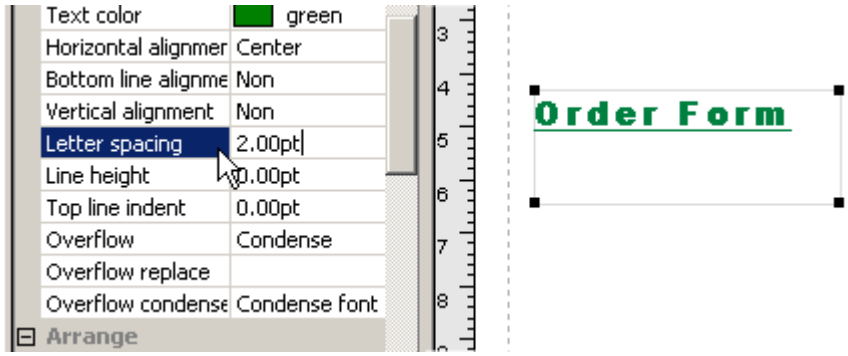
Height and alignment of the line

Sets the alignment of the line in the text area.



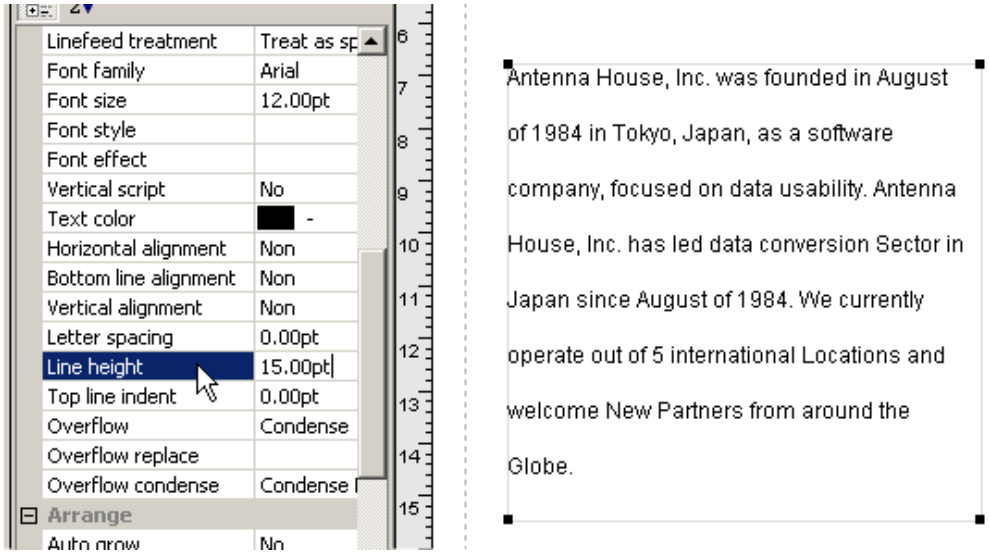
Letter Spaceing

Set the space between the characters.



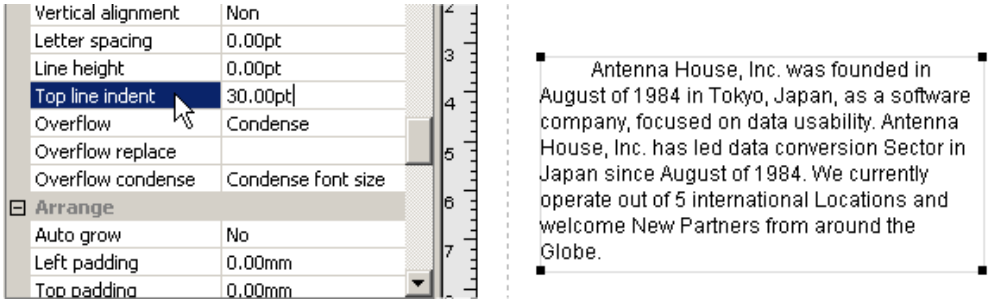
Height and alignment of the line

Sets the height and alignment of the line in the text area.



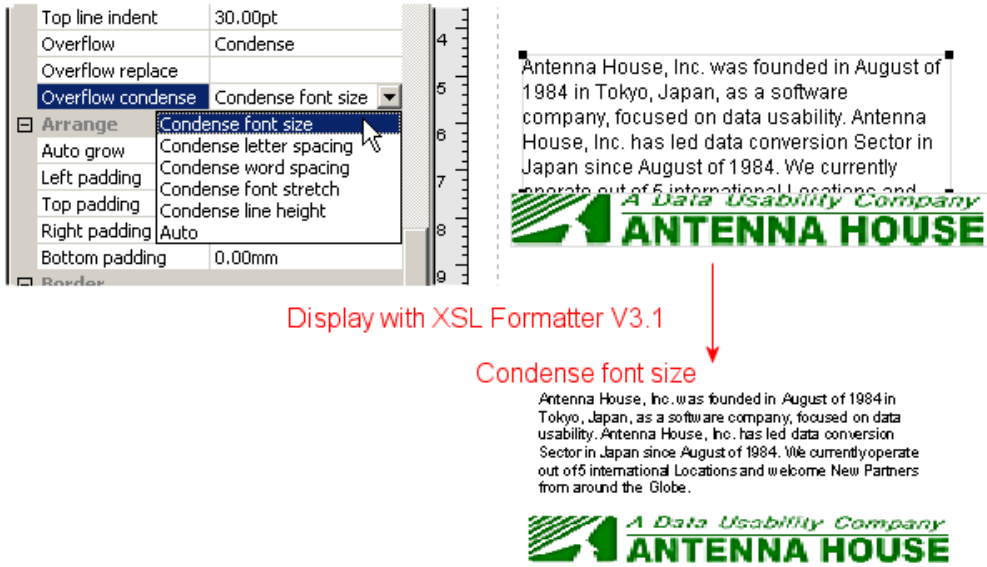
Indent for the first line

Sets the indent for the first line. The alignment of last line can also be set.



Overflow processing

Sets the method for processing the character overflow when the length of the inside character string is longer than what the size of the object can hold.

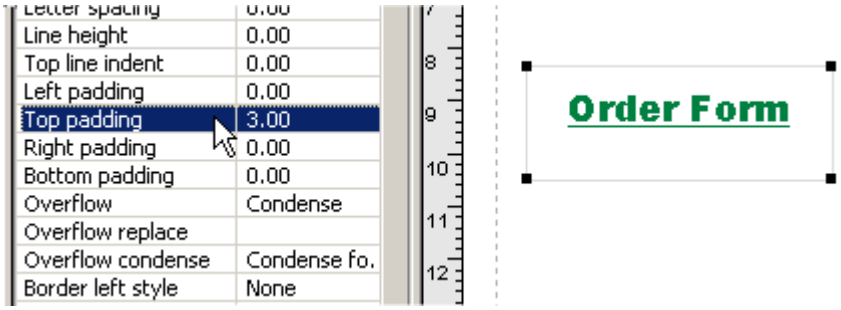


Arrange Properties

Properties	Value	Description
Auto grow	Yes/No	Sets whether to extend object according to size of the data.
Top/Bottom/Left/Right Padding	Numeric value (mm/in/pt)	Sets the amount of the space between the top/ bottom/left/right edge of the rectangular area of the object and the text.

Padding in the frame

Sets the amount of the space between top, bottom, left and right of a rectangular area of the object and the text.

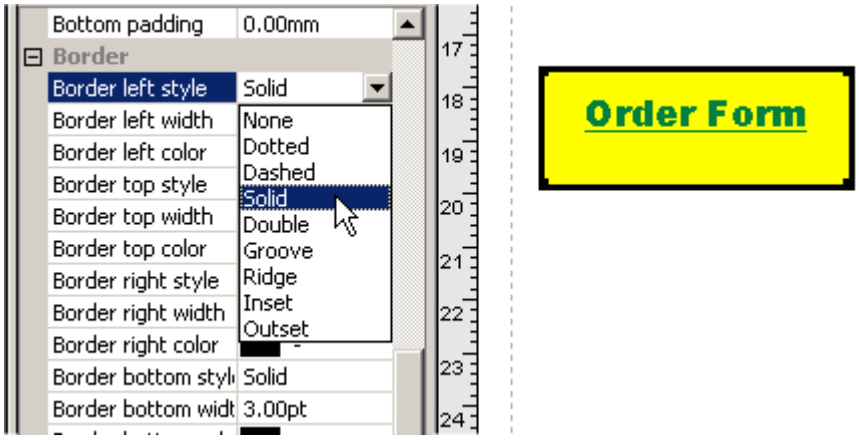


Border Properties

Properties	Value	Description
Border (Top/Bottom/ Left/Right) style	None/Dotted/Dashed/Solid/Double/ Groove/Ridge/Inset/Outset	Sets the style of each border line individually.
Diagonal (Reverse diagonal) style		Sets the style of Diagonal (Reverse diagonal).
Border (Top/Bottom/ Left/Right) width	Numeric value (mm/in/pt)	Sets the width of each border line individually.
Diagonal (Reverse diagonal) width		Sets the width of Diagonal (Reverse diagonal).
Border (Top/Bottom/ Left/Right) color	Hexadecimal RGB value starting with #, or W3C color name.	Sets the color of each border line individually.
Diagonal (Reverse diagonal) color		Sets the color of Diagonal (Reverse diagonal).

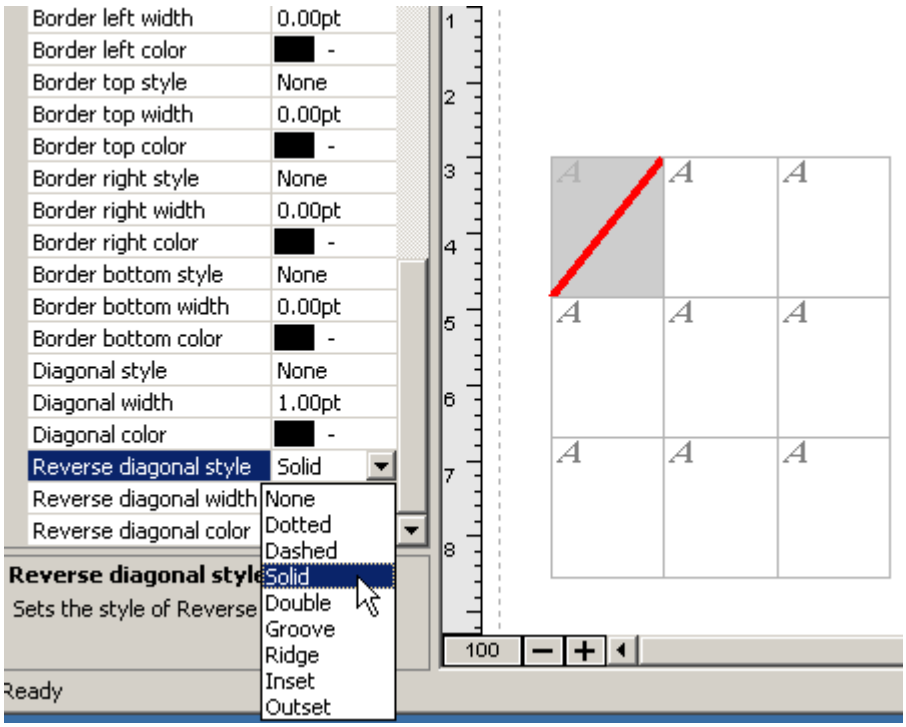
Frame border

The style, width and color of the border for the text object can be specified as can the border for the frame. Border settings for text objects in table cells cannot be set. The border for the table cell can be set.



Put diagonal line in the cell

Inputs a Diagonal or Reverse diagonal line in the table cell. The style, width and color of the diagonal line can be set.



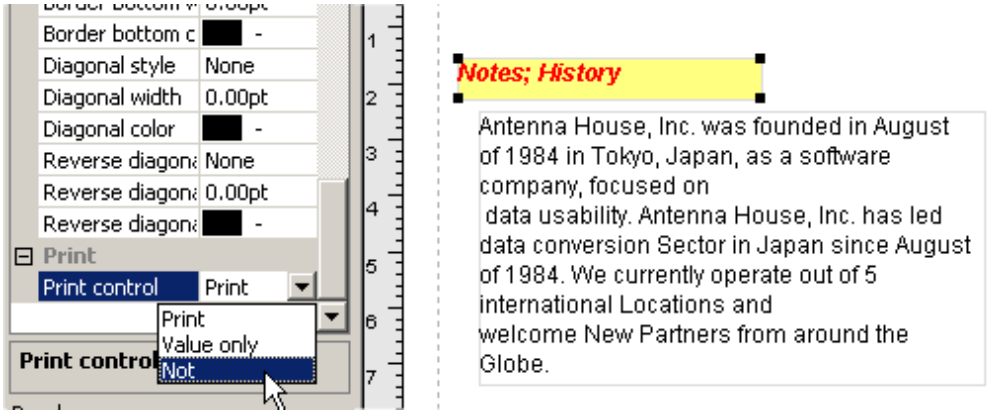
The "Antenna House XSL Formatter V4.0" or later, or The "Antenna House AH Formatter V4.0" or later is necessary for the screen display (preview), print and the PDF output of the diagonal and reverse diagonal.

Print Property

Properties	Value	Description
Print control	Print/Value only/Not	"Print" prints according to the setting. "Value only" prints only the value and not the frame. This is used with pre-printed forms. "Not" does not print regardless of the setting.

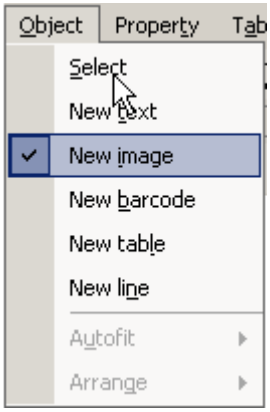
Print control

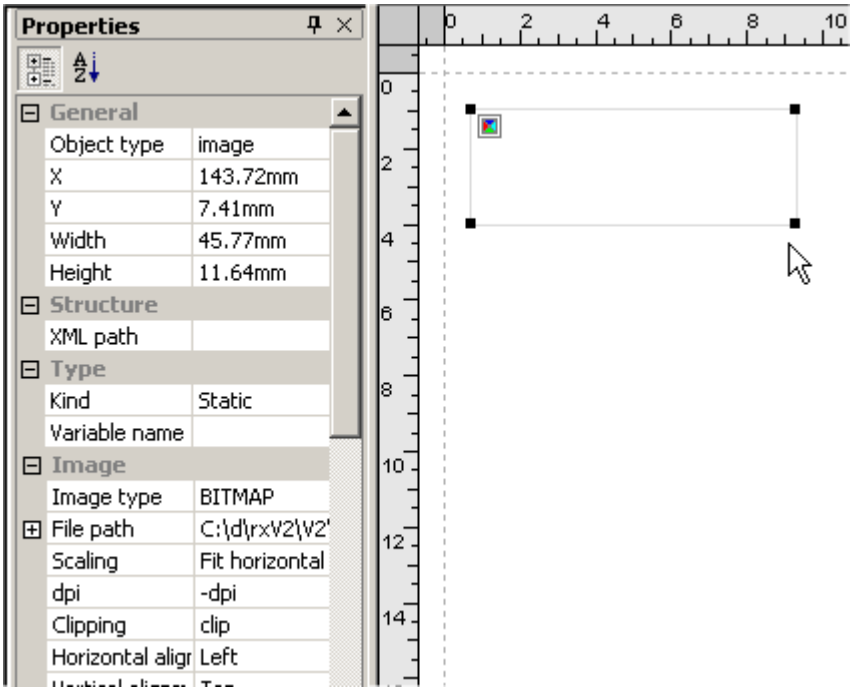
Controls how the frame is printed. For instance you might want to have a frame with a memo or note such as the following yellow frame. This can then be marked not to output to XSL-FO.



22.2 Image object

New image object can be put on layout pane by selecting New image from the Object menu and then making the object frame with the mouse.





The mark in the upper left corner is used to denote an image object. Images cannot be edited in XSL Report Designer.

Properties	Value	Description
Object type	image	The object type is image.

General Properties

The position where the object is placed and the size of the object can be controlled on the layout pane with the mouse. Please refer to General Properties. （page 173)

The background color property cannot be set for an image object.

Structure Properties

Specifies the XML path for the reference XML data. Please refer to Structure Properties. （page 175)

Refer to Properties that refer to XML data （page 164) for additional information about the input of XML path.

Type Properties

Sets the object type.

Properties	Value	Description
Kind	Field/Static	Select the type of data in image object from "Field" or "Static." When "Field" is selected the image specified by XML path is embedded.
Variable name	arbitrary	Used to set a name to the object. The name set here can be referred to by expressions in the project.

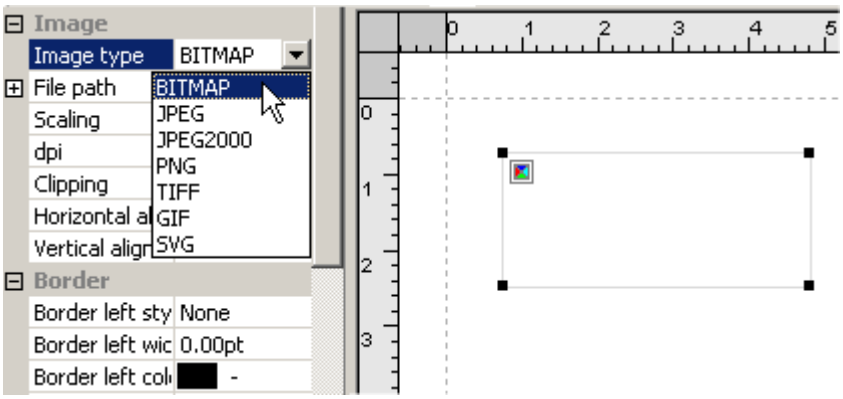
Image Properties

Properties	Value	Description
Image type	BITMAP/JPEG/JPEG2000/ PNG/TIFF/GIF/SVG	Specifies what type image is selected; "BITMAP," "JPEG," "JPEG2000," "PNG," "TIFF," "GIF" and "SVG."
File path	Path to the image file	Path of the image file is set for "Static" in the Kind property.
Save full path	Yes/No	Whether to save as full path. If "No" its saved as a relative path.
Scaling	Fit horizontal/ Fit vertical/ Fit to box/ Fit to image size/ dpi	Sets how the image expands and contracts to fit the image rectangle. "Fit horizontal" holds the ratio of length and breadth, then fits to the width of the frame. "Fit vertical" holds the ratio of length and breadth, then fits to the length of the frame. "Fit to box" does not hold the ratio of length and breadth, then fits to the frame size. "Fit to image size" sets the size specified by the image data. (Only for Vector graphics) "dpi" matches dpi specified. (Only for Raster graphics)
dpi	Numeric value	The dpi value for "dpi" in the Scaling property.
Clipping	Clip/ No clip/ Fit to image	Whether to do clipping (maintain image size, but trim to fit the frame). "Clip" keeps the image from overflowing the frame. "No clip" overflows the frame. "Fit to image" sets the frame size to fit the size of the image. Can only be used for Vector graphics or when "dpi" is set in the Scaling property.
Horizontal alignment	left/right/center	Sets the horizontal axis position "left," "right," "center" for the frame.
Vertical alignment	top/bottom/center	Sets the vertical axis position to "top," "bottom," "center" for the frame.

The following examples of image properties:

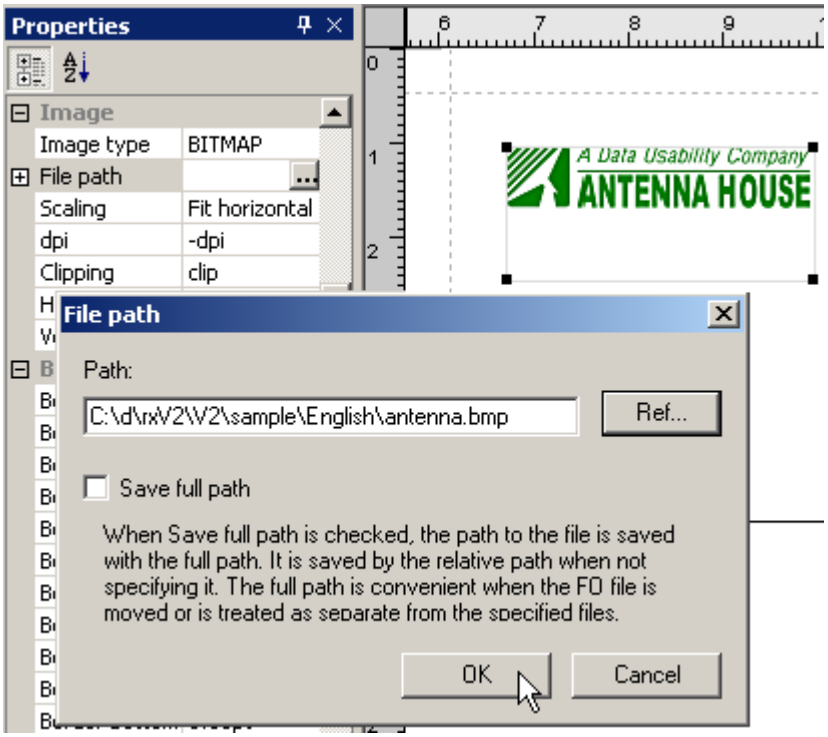
Image type

Specify the type of image.



Static image

When the Kind property is "Static" the path for the image file can be specified directly.

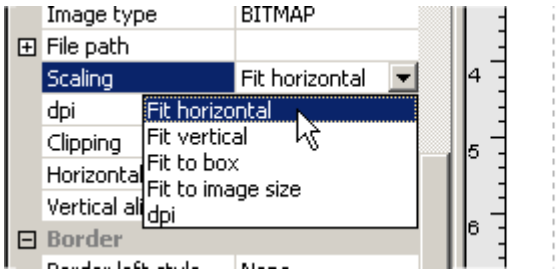


When Save Full path is specified here the picture file is saved with the full path. Otherwise it is saved with the relative path. The full path is convenient when the FO file is moved or is treated separately from the specified image files.

Image frame

1. The size of image and frame

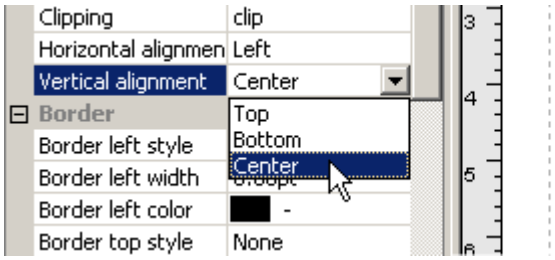
   Sets how the image expands and contracts and is placed.



   When "dpi" (dot per inch) is set as the input value the size of the image is controlled by the dpi value.

2. The position of the image in the frame

   Used to set horizontal axis and vertical axis for positioning the image in the frame.



Border Properties

A border can be placed around the frame of an object. Color, style and width can be specified. A diagonal and reverse diagonal can also be placed on the frame and have have color, width and style specified. Please refer to Border Properties. （page 181)

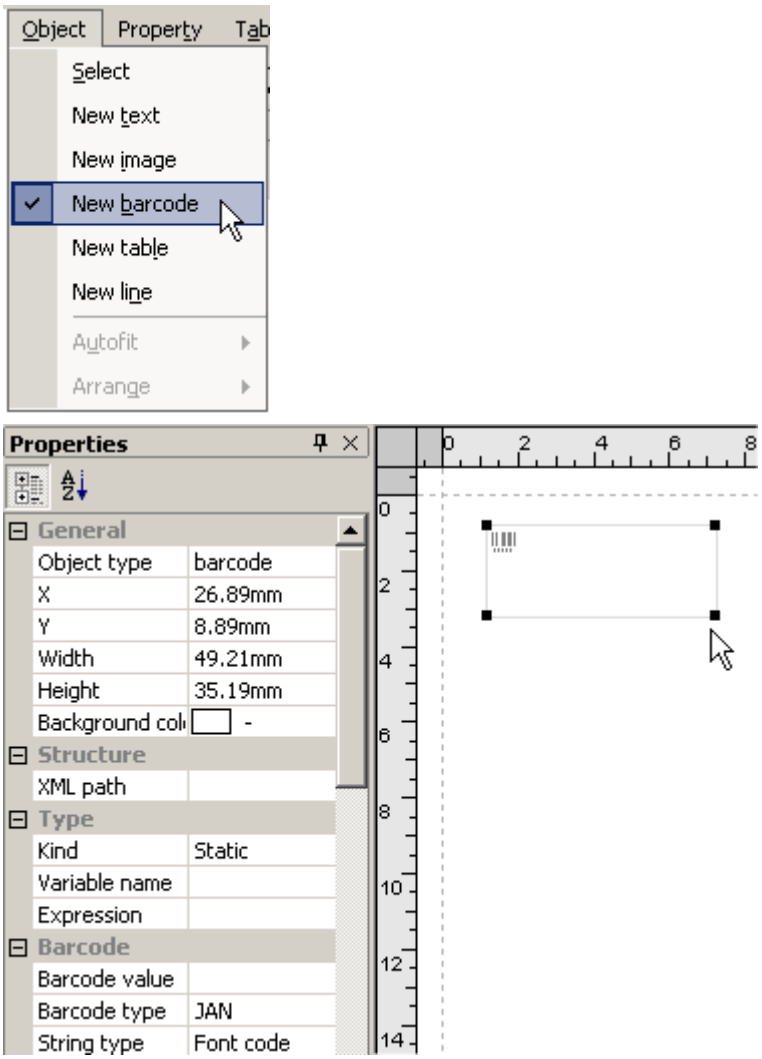
Print Property

Please refer to Print Property. （page 182)

22.3 Barcode object

In XSL Report Designer barcode objects can easily be prepared for print. The "XSL Formatter Barcode Option" or The "AH Formatter Barcode Option" is required to use barcode object. "XSL Formatter Barcode Option" or "AH Formatter Barcode Option" is available only for the Windows version of XSL Formatter or AH Formatter.

A new barcode object can be placed on the layout pane by selecting New barcode from the Object menu and then making the object frame with the mouse.



 is used to mark a barcode object.

Properties	Value	Description
Object type	barcode	The object type is barcode.

General Properties

The position where the object is placed and the size of the object can be controlled on the layout pane with the mouse. Please refer to General Properties. （page 173)

Structure Properties

Specifies the XML path for the XML data. Please refer to Structure Properties. （page 175)

Refer to Properties that refer to XML data（page 164) for additional information on XML path.

Type Properties

Sets Type Properties such as the type of the object and the setting of the expression.

Properties	Value	Description
Kind	Field/Static	Select the type of data in the barcode object from "Field" or "Static." When "Field" is selected the data specified by XML path is embedded.
Variable name	arbitrary	Sets a variable name for the object. The name set here can be referred to by expressions in the project.
Expression	Built-in function list	Sets the expression when calculation or additional processing of the embedded data is necessary.

Barcode Properties

Properties	Value	Description
Barcode value	arbitrary	Sets the data which is displayed as a barcode. It is effective only when "Static" is set in "Kind."
Barcode type	CODE39/CODE128/CODABAR/ EAN/EAN128/ITF/ JAN/POSTNET/UPC-A/UPC-E/ others	The type of the barcode is selected from "CODE39," "CODE128," "CODABAR," "EAN," "EAN128," "ITF," "JAN," "POSTNET," "UPC-A," "UPC-E" and "others."
String type	font-code/code-value	When "font-code" is selected the font code character string is generated. When "code-value" is selected the code value character string is generated. The code value character string is a character string obtained by calculating the check digit etc. In the preview display the barcodes that contain numerical symbols might not display correctly. The display will still show that the barcode is there. The font code character string generates the correct barcode stripes pattern as long as the font is correctly set.

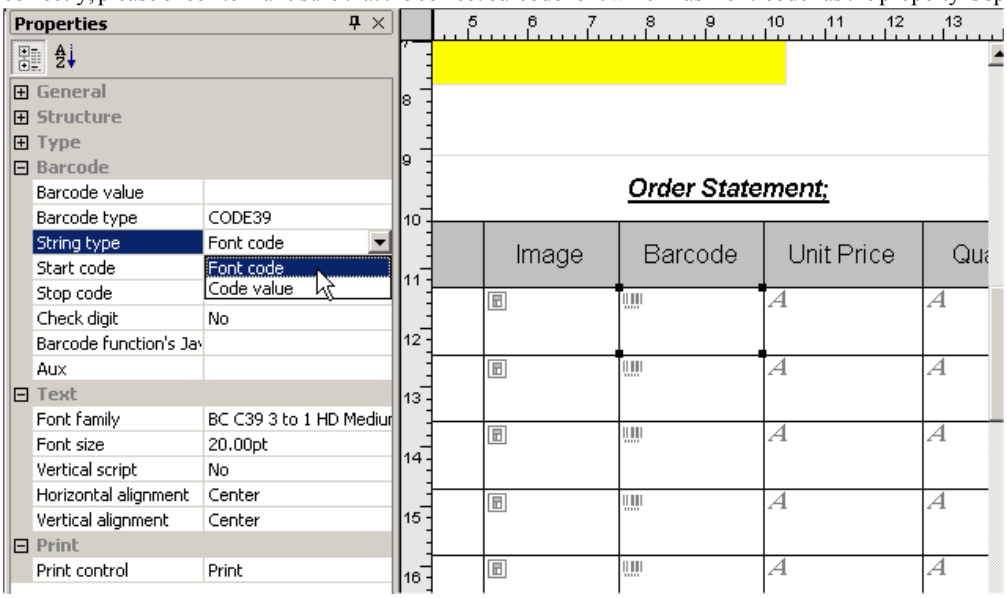
Following is an example of working with Barcodes:

Barcode input

Barcode value property specifies the data that is to be displayed as a barcode. It is effective only when the Kind property is set to "Static."

The Barcode type is specified from among various barcode such as CODE39, JAN and so on.

String type property specifies what kind of string is generated as a barcode string from the data. "font-code" is usually specified when you want to output the vertical stripes of the barcode by specifying the bar code font. "code-value" is specified when the output that is generated contains automatically created start codes, etc. in the character string. This helps when debugging the barcodes. If the vertical stripes of the barcode do not display correctly, please check to make sure that the correct barcode font which has "font-code" as the property is specified.



The specifications for the following properties varies according to the type of the barcode. Please thoroughly examine the specifications of the barcode you are using.
For instance, when "XSL Formatter Barcode Option" or "AH Formatter Barcode Option" is used with the EAN code and the JAN code, the start code and the stop code are ignored even if they are specified according to the specifications of the EAN code and the JAN code. Even if "No" is set to "Check digit" it is added according to the specification of the EAN code and the JAN code.

Properties	Description
Start code	The start code for the barcode.
Stop code	The stop code for the barcode. It is set according to the specification of barcode.
Check digit	Specifies whether to put the check digit on the barcode.

The followings properties are automatically handled as long as the XSL Formatter barcode option or the AH Formatter barcode option is used. These properties are provided for system developers to use when the the processing of customized special barcodes is required. For more detailed information please send your inquiry to support@antennahouse.com.

Properties	Description
Barcode function's Java class name	The complete barcode function's Java class name that processes the barcode.
Aux	This is the supplementary parameter used to generate the barcode. The usage differs depending on the barcode used and the program (Java class name of the bar code processing) that processes the barcode.

Text Properties

Properties that control text and character formattering in the object. Also, controls line and paragraph formats.

Properties	Value	Description
Font family	Select from the list	The font family is set by the font setting dialog. Each value set by this dialog is reflected in "Font size," "Font style" and "Font effect" property.
Font size	Numeric value (pt)	Sets Font size.
Vertical script	Yes/No	Sets vertical writing direction.
Text color	Hexadecimal RGB value starting with #, or W3C color name.	Sets Text color.
Horizontal alignment	None/Left/Right/Center/Justify	Sets how the string is arranged horizontally in the rectangular area of the object.
Vertical alignment	None/Top/Center/Bottom	Sets how the string is arranged vertically in the rectangular area of the object.

Border Properties

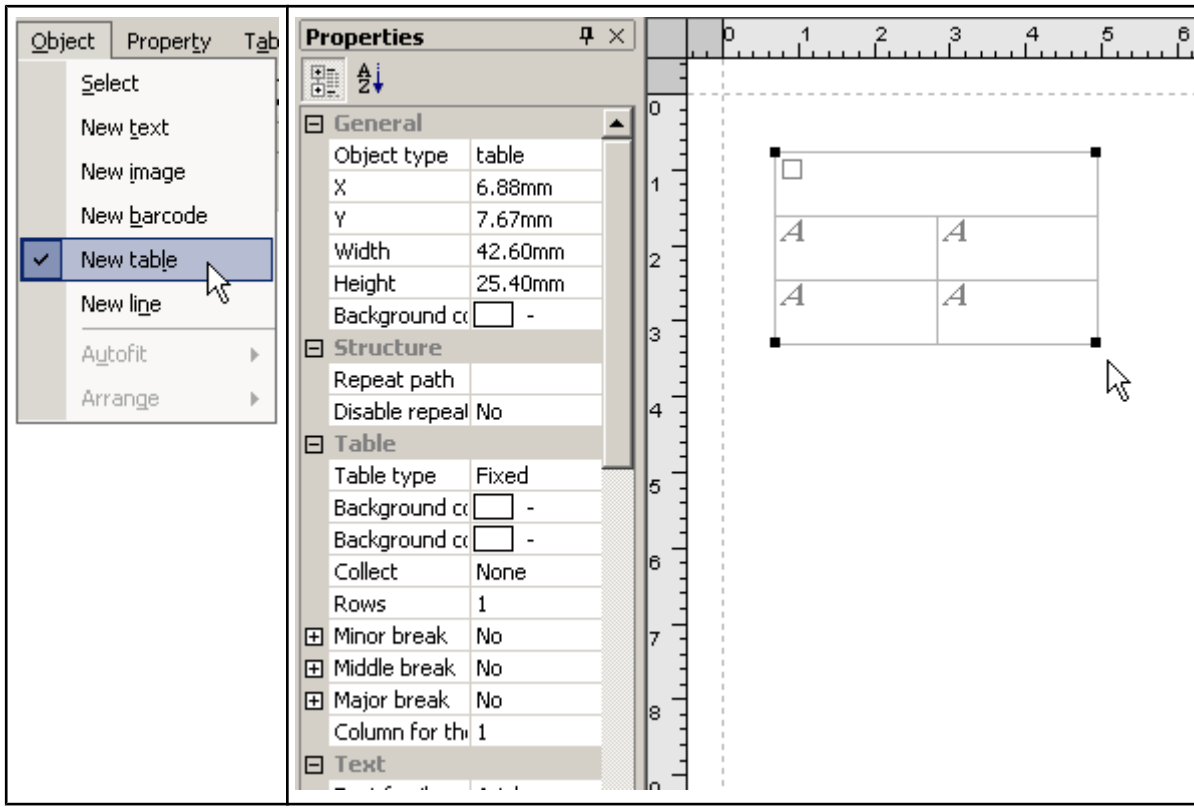
Please refer to Border Properties. （page 181)

Print Property

Please refer to Print Property. （page 182)

22.4 Table object

New table object can be made by selecting New table from the Object menu and then making an object frame on the layout pane with the mouse. Once the frame has been drawn the Table setup dialogue is displayed for setting the table specifications. .

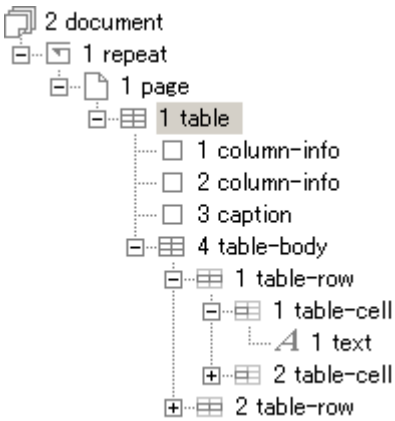


Once the specifications are set the table displaying the specified number of lines and columns is displayed. The default object in the table cell is a text object.

Properties	Value	Description
Object type	table	The object type is table.

Objects in the table

Tables consists of multiple objects.



When the property of the parent object is set or is changed, the property of it's child object is changed to the same value. When you want to change the property of the child object it has to be changed after setting property of parent object.

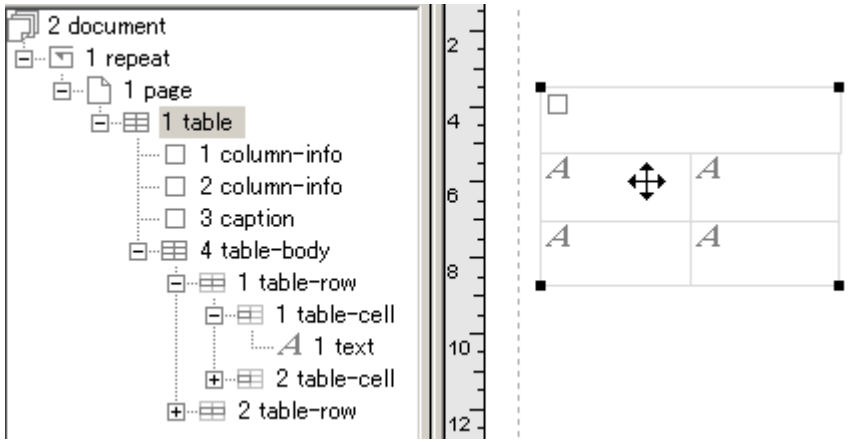
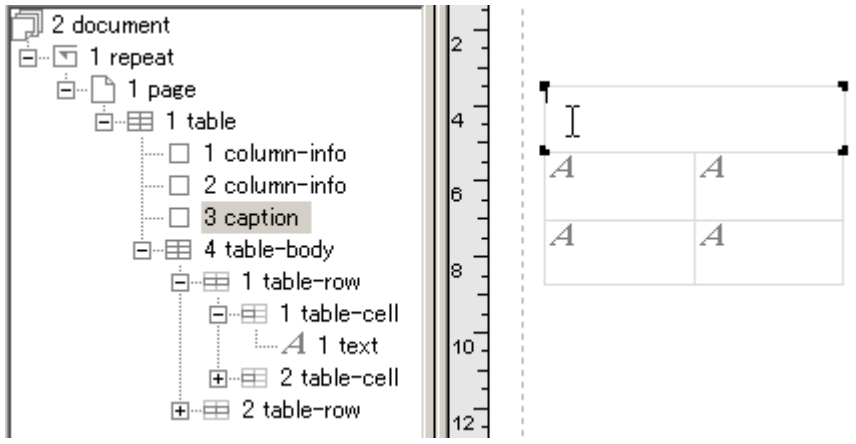
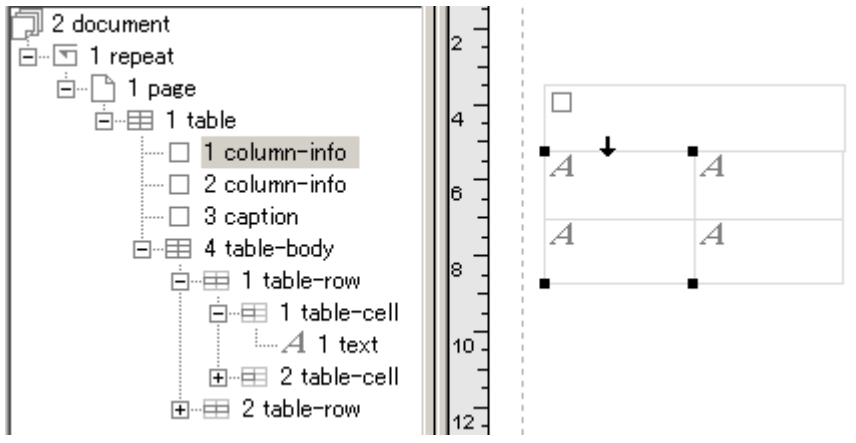
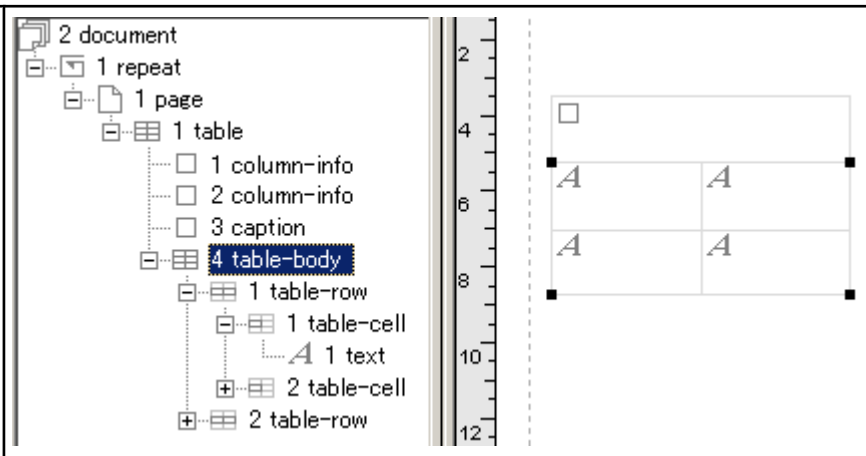
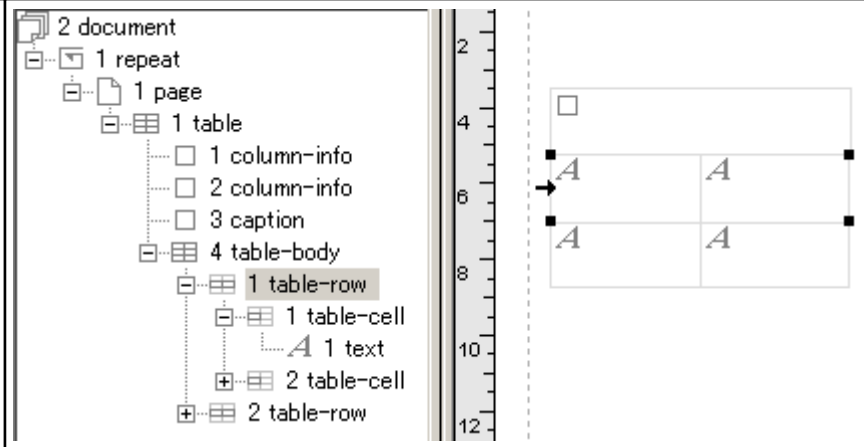
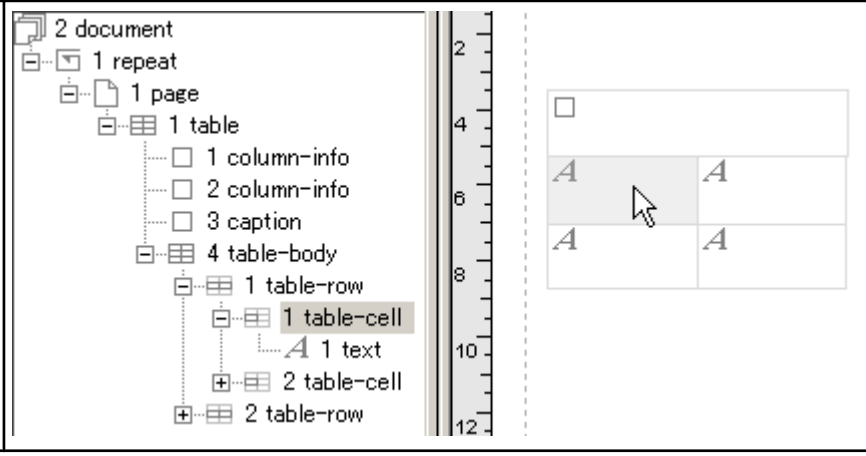
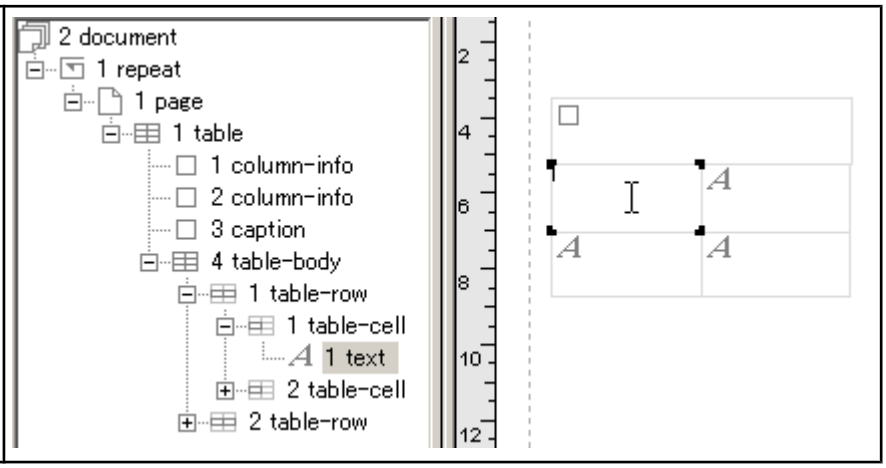
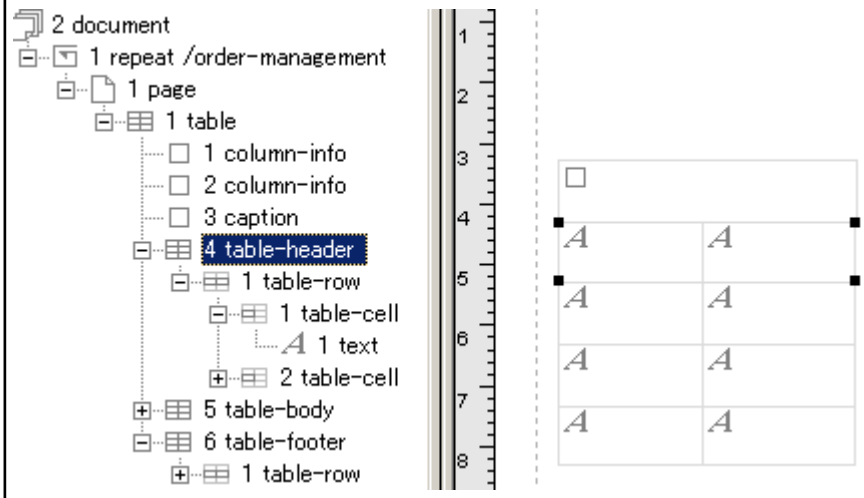
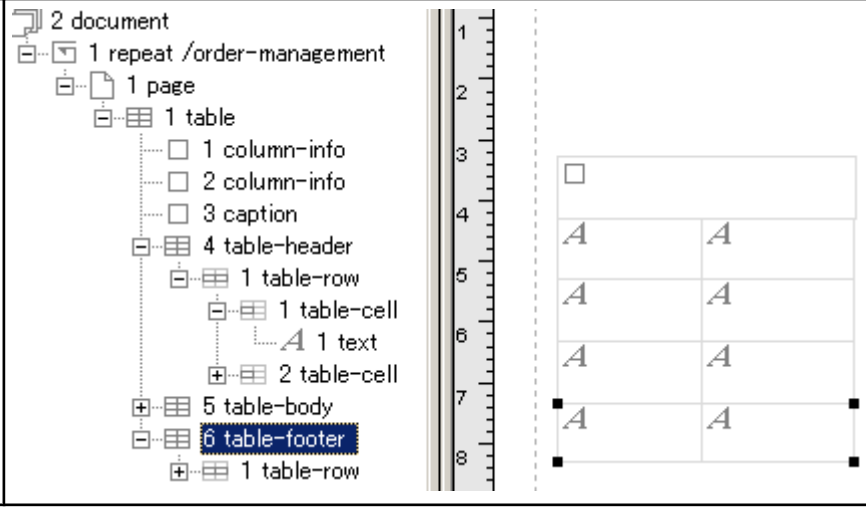
Object	Objects tree display
table	
caption	
column-info	

table-body	
table-row	
table-cell	

text	

When header and footer are specified the following objects are generated:

Object	Objects tree display
table-header	
table-footer	

Please refer to text object, image object and barcode object for more detailed information about each object that can be placed in a table cell.

General Properties

The position where the object is placed and the size of the object can be controlled on the layout pane with the mouse. Please refer to General Properties. （page 173)

Structure Properties

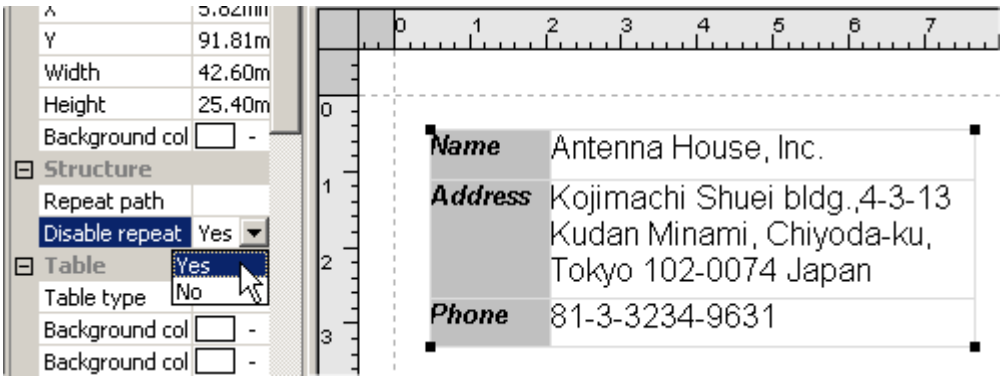
Specifies the path of the XML data to be used for reference.

Properties	Value	Description
Repeat path	The path of the element to be repeated	The position in which data starts repeating is specified by XML path.
Disable repeat	Yes/No	Sets whether to invalidate the repetition of data.

Refer to Properties that refer to the XML data （page 164) for more detailed information about the XML path.

Table that do not have repetition

Although tables are usually used to display data in the table by repeatedly processing the elements, you might want to use a fixed table for layout purposes to arrange blocks of characters. In that case the Disable repeat property should be set to "Yes."



Type Properties

Sets Type Properties such as the type of the object and the setting of the expression.

Properties	Value	Description
Language	Conforms to the language codes	Sets the language information that is then used to decide the format for subsubtotal, subtotal, and total.
Country	Conforms to the country codes	Sets the country information that is used to decide the format for subsubtotal, subtotal, and total.

Table Properties

Properties	Value	Description
Table type	Fixed/Variable	Table type can be specified as "Fixed" or "Variable." However, because it is not possible to specify it in the Properties window, please specify it by the Table setup dialogue of Setting in the Table menu.
Background color 1	Hexadecimal RGB value starting with #, or W3C color name.	Sets the background color of the odd number rows of the table body.

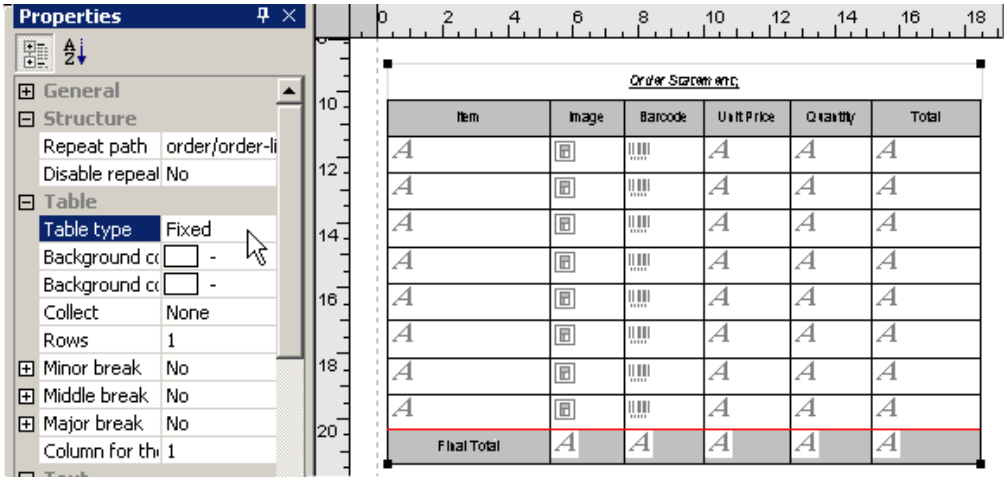
Background color 2		Sets the background color of the even number rows of the table body.
Set Grouping	None/Variable/Fixed	Used to specify the Grouping function in table object. "None" does not group cells. "Variable" groups and merges cells when the same data appears in consecutive cells in the same column. "Fixed" groups cells by the number of Rows property specified under Set Grouping. In this case cells are not merged and the border line is drawn.
Rows	arbitrary	When Fixed is chosen the number of lines to be grouped is specified.
Subsubtotal	Yes/No	Specifies whether to total by the unit of subsubtotal.
Subtotal	Yes/No	Specifies whether to total by the unit of subtotal.
Total	Yes/No	Specifies whether to total by the unit of total.
Column for the total	Column number that corresponds in table (counted from the left)	Specifies the target column for the total.

In addition to the table settings the following can be set for the subtotal, table processing and grand total properties.

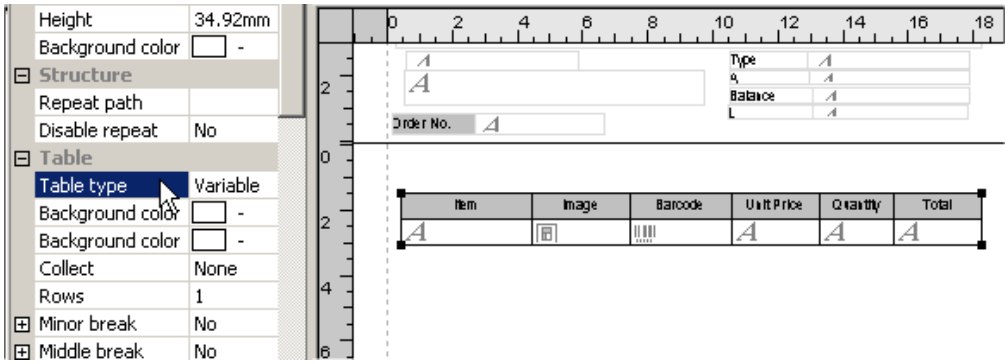
Properties	Value	Description
Column number to judge for break	Column number that corresponds in table (counted from the left)	Specifies the column number to be used as the break key.
Page break	Yes/No	Specifies whether to create a new page at the point of break.
Title	arbitrary	Specifies the title that is output for the total result. The specified title is output in the Title column.
Title column	Column number that corresponds in table (counted from the left)	Specifies the column that displays (prints) the total title.
Font family	Select from the list	The font to use for the total result row.
Font size	Numeric value (pt)	The font size to use for the total result row.
Format	Conforms to Java. Number, Currency, Date	The format to use for the total result row.
Background color	Hexadecimal RGB value starting with #, or W3C color name.	The background color to use for the total result row.

Fixed table and variable table

In a "Fixed" table the number of rows do not change according to the amount of data.



A "Variable" table expands the number of rows according to the amount of data. The rows of the table body is set by only one row in the layout pane.



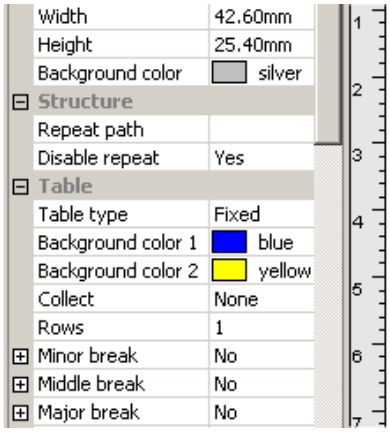
Because each table can be set regardless of the layout type, how the report is layed out determines whether to use a "Fixed" or "Variable" table.

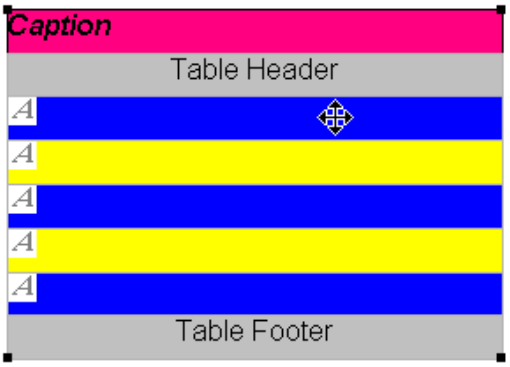
Example of the background color for Table.

The background color for the table is set by the Background color dialogue.

Background color specifies the background color for the whole object of the table. Background color 1 can specify the background color of the odd number rows of the table body. Background color 2 can specify the background color of the even number rows of the table body. The priority level of Background color is; (1)table-cell,
(2)table-row,
(3)Background color 1 / Background color 2,
(4)table-body/header/footer,
(5)table.

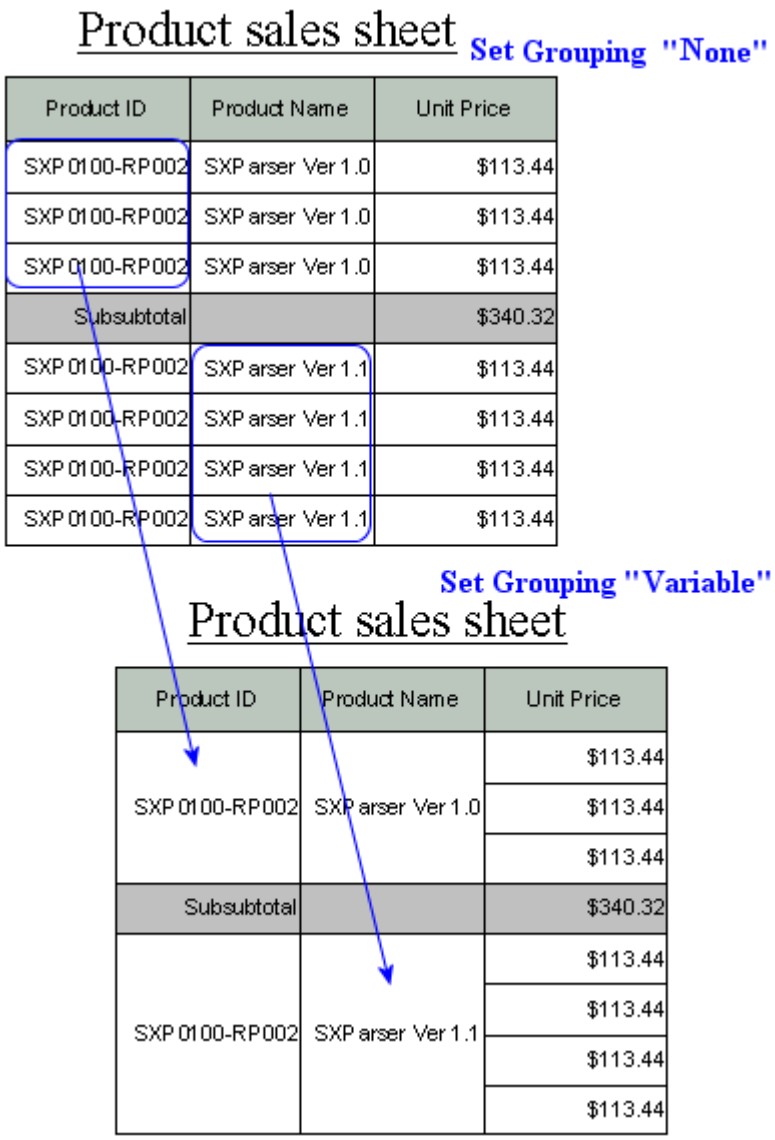
This is an example of a table where the "Silver" color was specified as the Background color for the table, "Blue" is set by Background color 1 and "Yellow" is set by Background color 2. The background color for the table caption is set separately.





Set Grouping

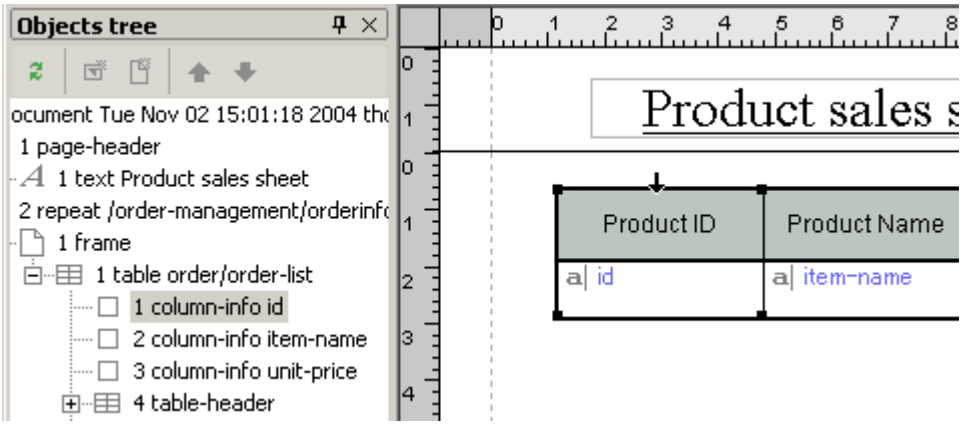
When the data that has the same content is used repeatedly in the same column, you can combine those cell together in the output. This function is called "Grouping." Grouping controls whether cells are automatically merged to create vertical spans. "Variable" groups and merges cells when the same data appears in consecutive cell of the column. "Fixed" groups the specified number of rows and removes the border between them without merging the rows.



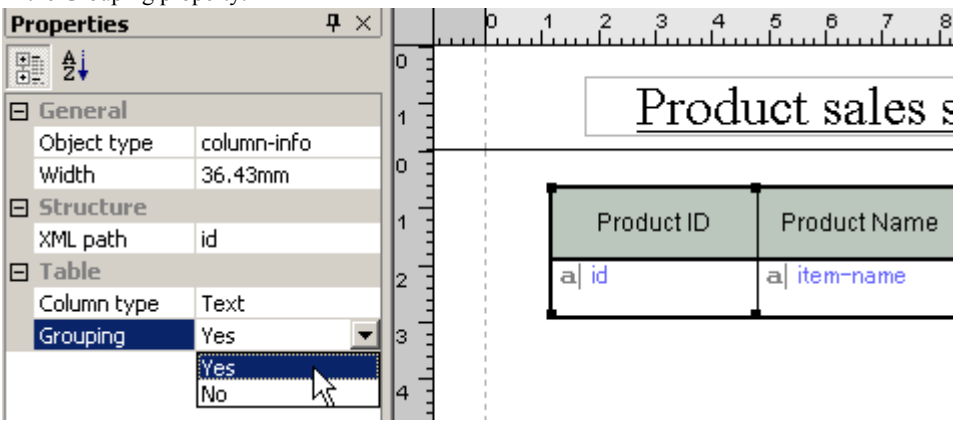
Which rows are brought together can be specified by the following two methods.

1. Change it in the Properties window

   Select the target column in the layout pane, or select "column-info" in the Objects tree window.



With the column (or "column-info") being chosen, open the Properties window and specify "Yes" or "No" in the Grouping property.

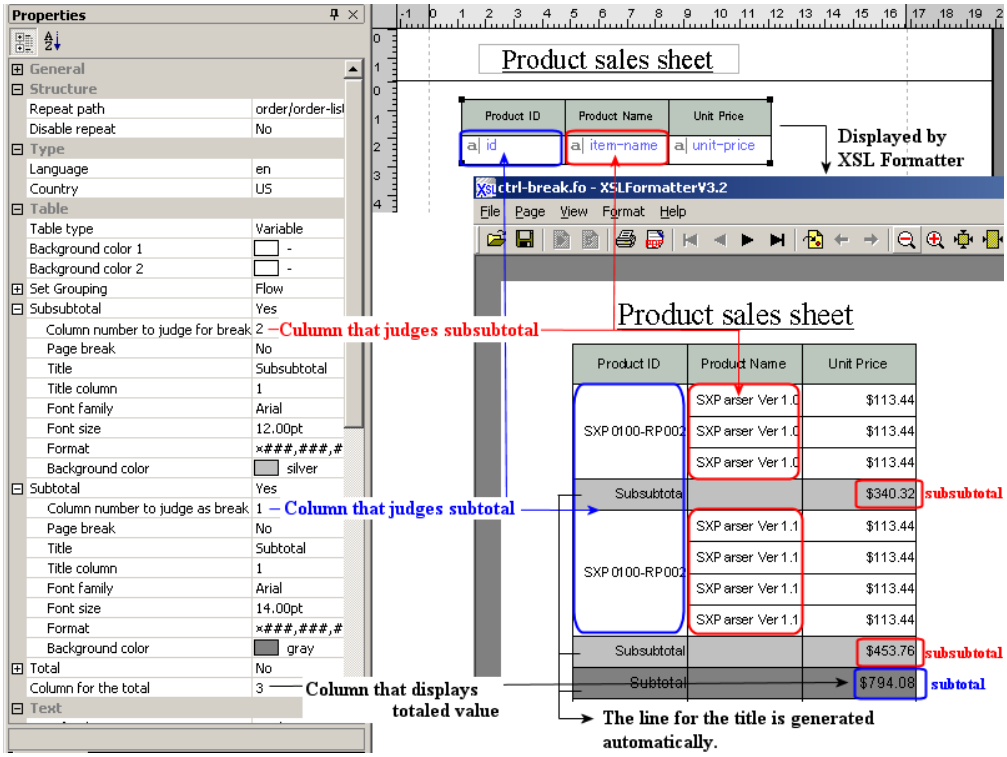


2. Change it using the Table setup dialogue

   Select the target table, and open the Table setup dialogue from Setting in the Table menu. Open Column setting tab and choose the column that you want to apply Grouping to from the Column list and then check "Grouping."

Counting the value in columns

The specified column is totaled at the level of subsubtotal, subtotal and total. The results are output to the column specified by "Column for the total." At each level, the Title of the results can be output to the column specified by the Title column. The font of the column that shows the title (font name and fontsize) and the format and the background colors can also be set.



Because the total result is output to a row that does not originally exist, the Set Grouping property specified by "Fixed" is not available for this function.

You can set this property by Control break tab in the Table setup dialogue opened from the Setting of the Table menu.

Text Properties

These are the properties that specifies the character format for the entire table.

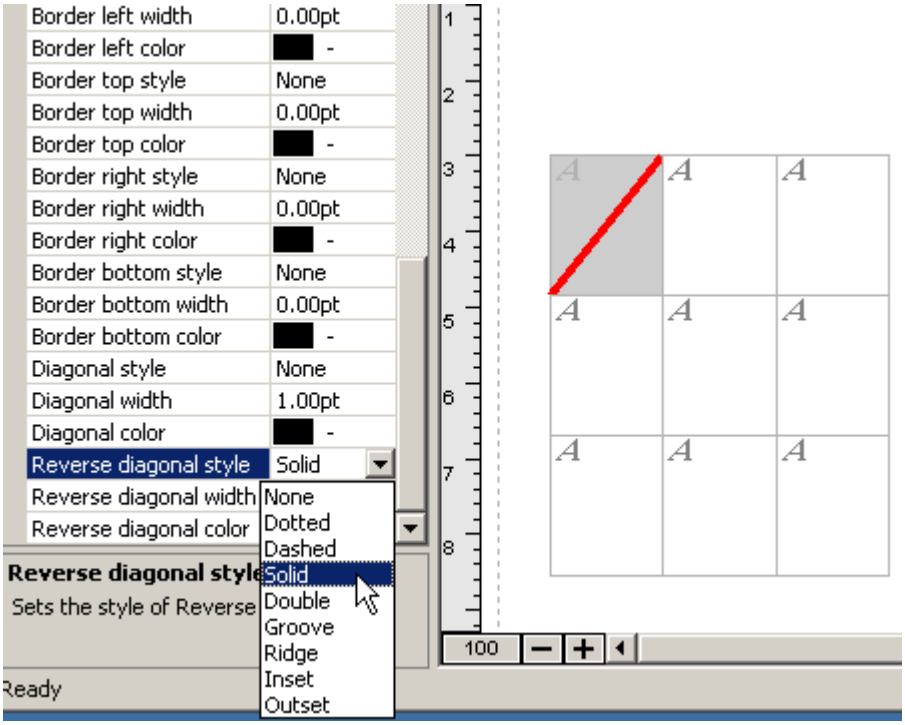
Properties	Value	Description
Font family	Select from the list	The font family is set with the Font dialogue. Each value set by this dialogue is reflected in the "Font size," "Font style" and "Font effect" property.
Font size	Numeric value (pt)	Font size.
Font style	Select from the list	Font style is set by the font setting dialogue.
Font effect	Select from the list	Font effect is set by the font setting dialogue.
Text color	Hexadecimal RGB value starting with #, or W3C color name.	Text color.

Border Properties

Please refer to Border Properties. (page 181)

Placing a diagonal line in a cell

A Diagonal line and a Reverse diagonal line in a cell have the properties of style, width and color.



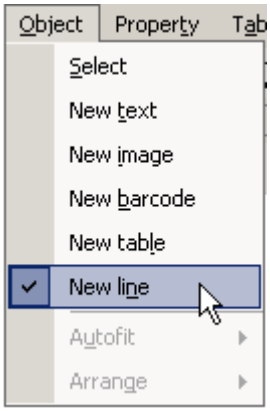
The "Antenna House XSL Formatter V4.0" or later, or the "Antenna House AH Formatter V5.0" or later is necessary to be able to preview, print and the produce PDF output with the diagonal and reverse diagonal lines.

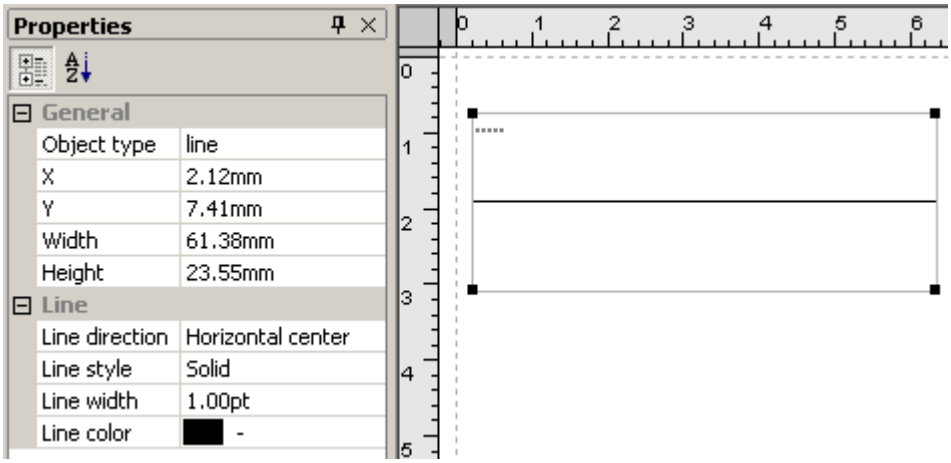
Print Property

Please refer to Print Property. (page 182)

22.5 Line object

This object is convenient when adding a simple horizontal or vertical line to the layout. A New line object can be placed by selecting New line from the Object menu and making an object frame by using the mouse on the layout pane.





The mark ····· in the upper left corner of the object frame is used to denote a line object.

Properties	Value	Description
Object type	line	The object type is line.

General Properties

The position where the object is placed and the size of the object can be controlled on the layout pane with the mouse. Please refer to General Properties. (page 173)

The background color property cannot be set for the line object.

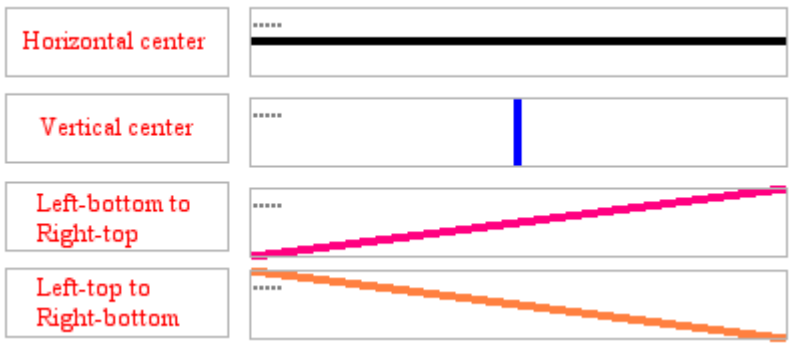
Line Properties

Properties	Value	Description
Line direction	None/Horisontal center/Vertical center/ Left-top to Right-bottom/Left-bottom to Right-top	The line direction of line object.
Line style	None/Solid/Dotted/Dashed	The line style of line object.
Line width	Numeric value (mm/in/pt)	Width/thickness of the line.
Line color	Hexadecimal RGB value starting with #, or W3C color name.	The color of the line object.

The direction, style, width and color of object

The direction, style, width and color of the line object can be set freely.

Example of line objects



Properties list

23 Properties list for .rxl file and .XSL file output

The following tables are the Properties list for each object and their level of support by the .rxl file and the .XSL file (output).

Level of Support	Description
yes	Both of .rxl file and .XSL file support it.
yes/no	.rxl file supports it. .XSL file does not support it.
yes(*)	.rxl file supports it. .XSL file supports it with limitation.

Property	Object																
	document	report-header/footer	page-header/footer	repeat	page	frame	label	text	image	barcode	table	caption	column-info	table-header/footer/body	table-fow	table-cell	line
Object type	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no
Repeat path				yes							yes						
Page break		yes		yes		yes											
Kind								yes/no	yes/no	yes/no		yes/no					
Variable name								yes/no (*)	yes/no (*)	yes/no (*)		yes/no (*)					
Data type								yes/no				yes/no					
XML path								yes	yes	yes		yes					
Expression								yes/no (*)		yes/no (*)		yes/no (*)					
Format								yes (*)				yes (*)					
Language								yes/no			yes/no	yes/no					
Country								yes/no			yes/no	yes/no					
Property expression								yes/no (*)	yes/no (*)	yes/no (*)		yes/no (*)				yes/no (*)	
X								yes	yes	yes	yes						yes
Y								yes	yes	yes	yes						yes

Width								yes	yes	yes	yes		yes				yes
Height		yes	yes			yes		yes	yes	yes	yes	yes			yes		yes
Print control		yes	yes					yes	yes	yes	yes	yes					
Linefeed treatment								yes				yes					
White space treatment								yes				yes					
Font family								yes		yes	yes	yes			yes		
Font size								yes		yes	yes	yes			yes		
Font style								yes			yes	yes			yes		
Font effect								yes			yes	yes			yes		
Vertical script								yes		yes		yes					
Text color								yes		yes	yes	yes			yes		
Background color								yes		yes	yes	yes			yes	yes	
Horizontal alignment								yes		yes		yes					
Vertical alignment								yes		yes		yes				yes	
Letter spacing								yes				yes					
Line height								yes				yes					
Top line indent								yes				yes					
Left padding								yes				yes				yes	
Top padding								yes				yes				yes	
Right padding								yes				yes				yes	
Bottom padding								yes				yes				yes	
Overflow								yes				yes					
Border left style		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border left width		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border left color		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border top style		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border top width		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	

Border top color		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border right style		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border right width		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border right color		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border bottom style		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border bottom width		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Border bottom color		yes			yes	yes	yes	yes	yes	yes	yes	yes		yes	yes	yes	
Diagonal style								yes	yes	yes	yes	yes		yes	yes	yes	
Diagonal width								yes	yes	yes	yes	yes		yes	yes	yes	
Diagonal color								yes	yes	yes	yes	yes		yes	yes	yes	
Reverse diagonal style								yes	yes	yes	yes	yes		yes	yes	yes	
Reverse diagonal width								yes	yes	yes	yes	yes		yes	yes	yes	
Reverse diagonal color								yes	yes	yes	yes	yes		yes	yes	yes	
Layout type	yes																
Paper type	yes																
Reference XML file	yes/ no																
Comment	yes/ no																
Print page header		yes															
Print page footer		yes															
Include page count		yes/ no															
Reset page number				yes/ no													

First page number				yes/ no													
Parent repeat path						yes											
Place						yes											
Keep together						yes											
Auto grow								yes									
Bottom line alignment								yes									
Overflow replace								yes									
Overflow condense								yes									
Image type									yes								
File path									yes								
Save full path									yes								
Scaling									yes								
dpi									yes/ no								
Clipping									yes								
Horizontal alignment									yes								
Vertical alignment									yes								
Barcode value										yes							
Barcode type										yes							
Barcode function's Java class name										yes/ no							
Start code										yes							
Stop code										yes							
Check digit										yes							
Aux										yes							
String type										yes							
Table type											yes						
Disable repeat											yes						

Background color 1											yes/ no						
Background color 2											yes/ no						
Set Grouping											yes/ no						
Rows											yes/ no						
Subsubtotal/ Subtotal/ Total											yes/ no						
Column number to judge for break											yes/ no						
Page break (for Subsubtotal/ Subtotal/ Total)											yes/ no						
Title											yes/ no						
Title column (for the title)											yes/ no						
Font family (for Subsubtotal/ Subtotal/ Total)											yes/ no						
Font size (for Subsubtotal/ Subtotal/ Total)											yes/ no						
Format (for Subsubtotal/ Subtotal/ Total)											yes/ no						
Background color (for Subsubtotal/ Subtotal/ Total)											yes/ no						
Column for the total											yes/ no						
Caption side												yes					
Column type													yes/ no				

Grouping													yes/ no				
Cell type																yes/ no	
Line direction																	yes
Line style																	yes
Line width																	yes
Line color																	yes

* Notes;

- In XSL file the Format for numerical values is output. The Format for other types of data (i.e. for dates) is output as a comment in the XSL file.
- In XSL file the properties of "Set Grouping" and "Control break" for tables are not output.
- In XSL file variable names and expressions are not output. They are output as comments in the XSL file.

24 Properties list

This is the list of properties which can be specified in XSL Report Designer.

Property	Description
Object type	Displays the name of the object.
Repeat path	The position at which data starts repeating is specified by the XML path.
Page break	Specifies whether to break a page at the end of the current object.
Kind	The type of data is selected from "Field" or "Static." When "field" is selected for text, image and barcode the data specified by the XML path will be embedded.
Variable name	Used to set a name to the object. The name set here can be referred to by expressions in the project.
Data type	The type of the text data according to the content can be either "String," "Number," "Currency" or "Date."
XML path	Used to specify which part of the XML data is embedded. It becomes effective when selecting "Field" in "Kind."
Expression	This is set when the calculation or additional processing of the data is necessary.
Format	Used to set the format of "Number," "Currency" or "Date" which is set in "Data type."
Language	Sets language information used to control the formatting. In table object it controls the formatting of the column that the total result is output.
Country	Sets Country information used to control the formatting. In table object it controls the formatting of the column that the total result is output.
Property expression	This is set when dyanamic property changes are needed.

X	X-coordinate for the object. When a margin is displayed the X coordinate is measured from the from the left margin. If no margin is displayed it is measured from the left edge of the page, frame or label.
Y	Y-coordinate for the object. When a margin is displayed the Y coordinate is measured from the from the top margin. If no margin is displayed it is measured from the top edge of the page, frame or label.
Width	The width set for the object.
Height	The height set for the object.
Print control	■ Print Prints according to the setting. ■ Value only Prints only the value and not the frame. This is used with pre-printed forms. ■ Not It doesn't print regardless of the setting.
Linefeed treatment	■ Ignore Ignore linefeed. ■ Preserve as linefeed Changes line at the linefeed code position. ■ Treat as space Treats the linefeed code as a space. ■ Treat as zero width space Treats the linefeed code as a zero width space.
White space treatment	■ Ignore Ignore white space. ■ Preserve as white space The space is put in the code position of the white space. ■ Ignore if before linefeed The space before the linefeed code is ignored. ■ Ignore if after linefeed The space after the linefeed code is ignored. ■ Ignore if surrounding linefeed The blank before and behind the linefeed code is ignored.
Font family	The font family is set by the font setting dialogue. Each value set by this dialogue is reflected in "Font size," "Font style" and "Font effect" property.
Font size	Font size is set.
Font style	Font style is set by the font setting dialogue.
Font effect	Font effect is set by the font setting dialogue.
Vertical script	Sets for vertical writing mode.
Text color	Sets text color.
Background color	Sets the background color of the object area defined by the rectangle.

Horizontal alignment	Sets how the string is arranged horizontally in the rectangular area of the object.
Vertical alignment	Sets how the string is arranged vertically in the rectangular area of the object.
Letter spacing	Sets the letter spacing.
Line height	Sets the line height.
Top line indent	Sets the amount of the indent of the first line.
Left padding	Sets the amount of space between the left edge of a rectangular area of an object and the text.
Top padding	Sets the amount of space between the top edge of a rectangular area of an object and the text.
Right padding	Sets the amount of space between the right edge of a rectangular area of an object and the text.
Bottom padding	Sets the amount of space between the bottom edge of a rectangular area of an object and the text.
Overflow	Sets how to process text when it exceeds the display area of an object. It is effective when "Auto grow" property is set to "No." ■ Hidden The overflowing part is not printed. ■ Replace The character string set to "Replace" is printed. It is embedded repeatedly until this character string fills the area. ■ Condense It is condensed based on the method set by "Overflow condense."
Border style	Sets the style of each border line individually.
Border width	Sets the width of each border line individually.
Border color	Sets the color of each border line individually.
Diagonal (Reverse diagonal) style	Sets the style of Diagonal (Reverse diagonal).
Diagonal (Reverse diagonal) width	Sets the width of Diagonal (Reverse diagonal).
Diagonal (Reverse diagonal) color	Sets the color of Diagonal (Reverse diagonal).
Layout type	The layout type set for the project is displayed. It cannot be changed.
Paper type	The paper type set for the project is displayed.
Reference XML file	The XML file that is used for structure reference for the project is displayed.
Comment	The comment character string of the project can be freely described.
Print page header	Sets whether to print page header on report header/footer.
Print page footer	Sets whether to print page footer on report header/footer.
Include page count	Sets whether to include report header/footer in the page count.
Reset page number	Sets whether to initialize the page number for each repeat.
First page number	Sets the first page number.

Parent repeat path	The repeat path set to the parent repeat is displayed. When the value is changed, it is reflected in the property of the repeat.
Place	Sets the arrangement of the frame objects. ■ Fixed Beginning Y-coordinates of the object can be set by the absolute coordinate from the top of the frame. However, the length of the frame doesn't change even if the length of the object expands. ■ Flow When the length of the object expands, the length of other objects and frames expand accordingly. This does not apply if the objects are arranged in succession horizontally.
Keep together	The objects in the frame are arranged on the same page.
Auto grow	Sets whether to extend object according to volume of data.
Bottom line alignment	Sets the horizontal alignment of the final line.
Overflow replace	Sets the replacement character string for "Replace" in "Overflow."
Overflow condense	Sets the processing for "condense" in "Overflow." ■ Condense font size Adjusts font size to condense. ■ Condense letter spacing Adjusts character space to condense. ■ Condense word spacing Adjusts word space to condense. ■ Condense font stretch Adjusts font stretch to condense. ■ Condense line height Adjusts line height to condense. ■ Auto Depends on the default of the system.
Image type	Specifies what type image is selected; "BITMAP," "JPEG," "JPEG2000," "PNG," "TIFF," "GIF" and "SVG."
File path	Path of the image file is set for "Static" in the Kind property.
Save full path	Sets whether to save full path to the image. If set to "No," a relative path is saved.
Scaling	Sets how to expand, contract and place the image. ■ Fit horizontal Holds the ratio of length to width and then fits to the width of the frame. ■ Fit vertical Holds the ratio of length to width and then fits to the length of the frame. ■ Fit to box Does not hold the ratio of length to width and then fits to the frame size.

	■ Fit to image size Sets the size specified by the image data. (Only for Vector graphics) ■ dpi It matches the dpi specified. (Only for Raster graphics)
dpi	Sets the dpi value for "dpi" in "Scaling."
Clipping	Whether to do clipping (maintain image size, but trim to fit the frame). "Clip" keeps the image from overflowing the frame. ■ Clip Keeps the image from overflowing the frame. ■ No clip Image overflows sides of the frame. ■ Fit to image Sets the frame size to fit the size of the image. Can only be used for Vector graphics or when "dpi" is set in the Scaling property.
Horizontal alignment	Sets the horizontal axis position "left," "right," "center" for the frame.
Vertical alignment	Sets the vertical axis position to "top," "bottom," "center" for the frame.
Barcode value	Sets the data displayed as a barcode. It is effective only when "Static" is set in "Kind."
Barcode type	The type of the barcode is selected from CODE39, CODE128, CODABAR, EAN, EAN128, ITF, JAN, POSTNET, UPC-A, UPC-E, and others.
Barcode function's Java class name	Sets the complete barcode function's Java class name that processes the bar code.
Start code	Sets the start code for the barcode. Even if it is set there are cases where it will be ignored by the classification of the barcode.
Stop code	Sets the stop code for the barcode. Even if it is set there are cases where it will be ignored by te classification of the barcode.
Check digit	Sets whether to put the check digit on the barcode. Even if it is set there are cases where it will be ignored by the classification of the barcode.
Aux	This is the supplementary parameter used to generate the barcode. The usage differs by the barcode used and the program (Java class name of the bar code processing) that processes the barcode.
String type	String type property specifies what kind of string is generated as a barcode string from the data. "font-code" is usually specified when you want to output the vertical stripes of the barcode by specifying the bar code font. "code-value" is specified when the output that is generated contains automatically created start codes, etc. in the character string. This helps when debugging the barcodes. If the vertical stripes of the barcode do not display correctly, please check to make sure that the correct barcode font which has "font-code" as the property is specified.
Table type	■ Fixed In a "Fixed" table the number of rows do not change according to the amount of data. ■ Variable

	A "Variable" table expands the number of rows according to the amount of data. The rows of the table body is set by only one row in the layout pane.
Disable repeat	Whether to invalidate the repetition of data by disabling it.
Background color 1	Sets the background color for the odd number rows of the table body.
Background color 2	Sets the background color for the even number rows of the table body.
Set Grouping	When the data that has the same content is used repeatedly in the same column, you can combine those cell together in the output. ■ None Does not group cells. ■ Variable Groups and merges cells when the same data appears in consecutive cells of the column. ■ Fixed groups cells by the number of Rows property specified under Set Grouping. In this case cells are not merged and the border line is drawn.
Rows	When Fixed is chosen the number of lines to be grouped is specified.
Subsubtotal/Subtotal/Total	When you set Grouping, specify at which level the grouping is set.
Column number to judge for break	Sets the column number to be used as the break key for grouping.
Page break (for Subsubtotal/ Subtotal/Total)	Sets whether to change page when the break happens.
Title	Specifies the title that is output for the total result. The specified title is output in the Title column.
Title column	Sets the column for the title.
Font family (for Subsubtotal/ Subtotal/Total)	Sets the font of the total result row.
Font size (for Subsubtotal/ Subtotal/Total)	Sets the font size of the total result row.
Format (for Subsubtotal/ Subtotal/Total)	Sets the format of the total result row.
Background color (for Subsubtotal/Subtotal/Total)	Sets the background color of the total result row.
Column for the total	Sets the column that the total result is output to.
Caption side	Sets whether to put the caption "Above" or "Below" the table.
Column type	The objects put in the column of the table-body is selected from "Text," "Image" and "Barcode."
Grouping	Whether Grouping of each column is set is specified. This check box is available only when "Set Grouping" property is specified for "Variable" or "Fixed." Even if the "Set Grouping" in the Table setting tab is set the Grouping is not available unless this item is checked.
Cell type	The kind of object specified for the cell is displayed. This is the same kind as specified for the column and it is not possible to change.
Line direction	Sets the line direction of Line object.

Line style	Sets the line style of Line object.
Line width	Sets the line width of Line object.
Line color	Sets the line color of Line object.

Built-in Functions

25 The list of Built-in Functions

The Built-in Functions that can be used by the expression of XSL Report Designer is as follows.

Feature	Function	Parameter	Returned value	Description
Return the absolute value	abs(numerical value)	Numerical value to find the absolute value.	numerical value	Return the absolute value of the numerical value specified by the parameter.
Return TRUE(1) when two parameters are TRUE(1).	and(logical expression 1,logical expression 2)	logical expression 1 logical expression 2	TRUE(1), FALSE(0)	Return TRUE(1) when two parameters are TRUE(1). Return FALSE(0) when either of two parameters is FALSE(0).
Check string occurrence	contains(character string 1, character string 2)	character string 1 character string 2	TRUE(1), FALSE(0)	Check whether or not the specified character string 1 contains the specified character string 2. Return TRUE(1) if character string 1 contains character string 2, FALSE(0) otherwise.
Return the current page	currentPage()	-	Character string (String)	Return <fo:page-number/> that means a current page within the fo.
Return the current date	date(format, country, language)	format character string country character string language character string	Character strings (String)	Output the current date in the format that is specified by format.
Convert the date into character string	date2str(Date)	Date; The date (Numerical value) to convert into character string.	Character string	The date character string is output at the specified date. The date character string is the form of YYYY/MM/DD. The numerical value at the specified date is GMT January 1st of 1970, 00:00:00.
Calculate the date	dateCalc(Date character string, Calculation field, Calculation value)	Date character string; Specify the date character string to calculate. Format should be YYYY/MM/DD. Calculation field; Specify the field to calculate. Format should be YEAR,MONTH,DATE. Calculation value; Specify the value to calculate. The minus is applied to the numerical value to subtract.	Character string (String)	The calculation value is added to specified field (YEAR,MONTH,DATE) of the date specified by the parameter. The calculation result returns by the character string in the form of YYYY/MM/DD.

Compare character strings.	exact(character string 1, character string 2)	character string 1 character string 2	TRUE(1), FALSE(0)	Return TRUE(1) when the specified character strings are equal. Return FALSE(0), when the specified character strings are not equal.
Acquire the col number	getColNo()	-	Numerical value	Acquire the col number in the table. The col numbers start from 1.
Return a record number.	getRecNo()	-	numerical value	Return a record number.
Return a repeat number.	getRepeatRowNo()	-	numerical value	Return a current repeat number.
Acquire the row number	getRowNo()	-	Numerical value	Acquire the row number in the table. The row numbers start from 1.
Return the value of a current object.	getThisValue()	-	character string	Return the value of a current object.
Return the average value	hAvg()	-	Numerical value (double precision)	Return the average value of horizontal cells. Cells to the left of the cell that has hAvg-function are calculated. When the data type of the cell is character or there is no data in the cell, it is not included in the calculation. Note)
Return the number of cases	hCount()	-	Numerical value (double precision)	Return the number of cases in the horizontal cell. Cells to the left of the the cell that has hCount-function are calculated. When the data type of the cell is character or there is no data in the cell, it is not included in the calculations.
Return the total	hSum()	-	Numerical value (double precision)	Return the total in the horizontal cell. Cells to the left of the the cell that has the hSum-function are calculated. When the data type of the cell is character or there is no data in the cell, it is not included in the calculations.
Processing is distributed	if(logical expression, true case, false case)	logical expression true case false case	The value specified in the case	Processing is distributed to a true case and a false case

by the logical expression.			of the true and the false	by evaluating of the logical expression.
Index of string	indexOf(character string 1, character string 2)	character string 1 character string 2	Numerical value	Return the index within the specified character string 1 of the first occurrence of the specified character string 2. Returned index value starts from 1. -1 is returned if the character string 2 is not substring of the character string 1.
Last index of string	lastIndexOf(character string 1, character string 2)	character string 1 character string 2	numerical value	Return the index within the specified character string 1 of the last occurrence of the specified character string 2. Returned index value starts from 1. -1 is returned if the character string 2 is not substring of the character string 1.
Match of string	matches(string, regex)	string regex	TRUE(1), FALSE(0)	Check whether or not the specified string matches the specified regular expression. Return TRUE(1) if matched, FALSE(0) otherwise. It is the same as the matches method of the String class of Java.
Return the length of the character string	length(character string)	Character string	Numerical value (double precision)	Return the length of character strings of parameter. It is the same as the length method of the String class of JAVA.
Return larger numerical value.	max(numerical value 1, numerical value 2)	numerical value 1 numerical value 2	numerical value	Return the larger of two specified numerical values.
Return smaller numerical value.	min(numerical value 1,numerical value 2)	numerical value 1 numerical value 2	numerical value	Return the smaller of two specified numerical values.
Return FALSE(0) when the parameter is TRUE(1), and return TRUE(1) when the	not(logical expression)	logical expression	TRUE(1), FALSE(0)	Return TRUE(1) when the logical expression is FALSE(0), and return FALSE(0) when the logical expression is TRUE(1).

parameter is FALSE(0).				
Convert the numerical value into the character string	num2str(Numerical value)	Numerical value converted into character string	Character string (String)	
Return TRUE(1) when either of two parameters is TRUE(1).	or(logical expression 1, logical expression2)	logical expression 1 logical expression 2	TRUE(1), FALSE(0)	Return TRUE(1) when either of two parameters is TRUE(1). Return FALSE(0) when two parameters are FALSE(0).
Return the total of records	recSum(name)	Specify the name with character string	Numerical value (double precision)	Return the total specified by the name. Cleared for each record.
eReturn the remainder.	remainder(numerical value 1,numerical value 2)	numerical value 1 numerical value 2	numerical value	Return the remainder of (numerical value 1 / numerical value 2). Same as % in Java.
All replacement of string	replaceAll(string, regex, replacement)	string regex replacement	Character string (String)	Replace each substring of the specified string that matches the specified regular expression with the specifed replacement. It is the same as the replaceAll method of the String class of Java.
Replacement of string	replaceFirst(string, regex, replacement)	string regex replacement	Character string (String)	Replace the first substring of the specified string that matches the specified regular expression with the specifed replacement. It is the same as the replaceFirst method of the String class of Java.
Set object property.	setProp(property name, property value)	property name character string property value character string	-	Set the specified property value to the specified property.
Set property of the object pointed by variable.	setPropByName(variable name, property name, property value)	variable name character string property name character string property value character string	-	Set the specified property value to the specified property of the object pointed by the specified variable.
Set object properies by using property group.	setProps(property group name)	property group name character string	-	Set object properties by using the specified property group.

Set properties of the object pointed by variable by using property group.	setPropsByName(variable name, property group name)	variable name character string property group name character string	-	Set properties of the object pointed by the specified variable by using property group.
Convert the character string into the date	str2date(Date character string, Format character string)	Date character string; The charactes string to convert into the date. Format character string; Format to do parsing.	Numerical value	The return value is the millisecond from GMT January 1st of 1970, 00:00:00.
Convert the character string into the numerical value	str2num(Character string)	Character string converted into numerical value	Numerical value (double precision)	
Return the substring	substring(Character string, Starting position)	Character string Starting position (The head position is 1.)	Character string (String)	Return the character string from the starting position of the specified character string.
Return the substring	substring(Character string, Starting position, Number of character)	Character string Starting position (The head position is 1.) Number of character	Character string (String)	Return the character string from the starting position of the specified character string to the number of characters.
Return the current time	time(format, country, language)	format character string country character string language character string	Character strings (String)	Output the current time in the format that is specified by format.
Convert the character string to the lowercase letter	toLowerCase	Character string converted to the lowercase letter	Character string (String)	Convert the character string to lowercase letters.
Return the number of total pages	totalPages()	-	Character string (String)	Return <fo:page-number-citation id-ref="rx-page-number-citation-last-page" />
Return the final total	totalSum(name)	Specify the name by the character strings	Numerical value (double precision)	Return the final total of the numerical value for a specified named variable.
Convert the character string to the uppercase letter	toUpperCase	Character string converted to uppercase letter	Character string (String)	Convert the character string to the uppercase letters.
Return the average value	vAvg()	-	Numerical value (double precision)	Return the average value of vertical cell. Only numerical value in cell are calculated.

				Note) This is effective only on the table on which the consistent repeat is specified.
Return the number of cases	vCount()	-	Numerical value (double precision)	Return the number of cases in the vertical cell. Only numerical value in cells are included. Note) This is effective only on the table on which the consistent repeat is specified.
Return the total	vSum()		-	Return the total for the vertical cell. Only numerical values in cell are included. Note) This is effective only on the table on which the consistent repeat is specified.
Acquire the data from XML data	XPath(xpath)	xpath string:Relative path from the path of ancestor object.	Character string (String)	The XML data is extracted based on the location path specified with xpath. The location path is a relative path from an ancestor object. Restrictions: The first data is extracted when the table and the repeat have repetition.
Acquire the data from XML data	XPathEx(xpath)	xpath string: Relative path from the main repeat.	Character string (String)	The XML data is extracted based on the location path specified with XPathEx. The location path is referred from the subordinate position of the main repeat. Restrictions: The first data is extracted when the table and the repeat have repetition.

Note)
The calculation by this expression is effective in only the table for which the repetition is specified without contradiction. To use v*** expression in the table, it needs to consistent with the following conditions.
(1) Specify "No" to "Disable repeat" in table property.
(2) XML path is required to be set in order of Document→Repeat→Table(Repeat path)→Cell without contradiction.
(3) XML path specified for the cell of the same column must be all the same.


Runtime Engine

The Runtime Engine merges the project (layout) created with XSL Report Designer and your XML data to produce XSL-FO for creating screen, PDF or print files with Antenna House XSL Formatter or AH Formatter.

The following description of the Runtime Engine and how to implement it within an applications is written with assumptions that the reader has knowledge of the Java language, the programming, the start method, etc.. An understanding of Java is necessary before referring to these pages.

26 Operating Environment

It is necessary to install the execution environment of Java.
The environment of J2SDK1.5/JRE1.5 or higher is required.

27 Start by batch file

Antenna House provides the batch file "rxe.bat" for Windows, and the shell script "rxe.sh" for UNIX in the installed "bin" folder.
Please set environment variable "JRE_HOME" and "RXE_HOME" through the command mode.

Here is the Windows example:

- Example of setting environment variable.
  set JRE_HOME=c:/C:\jdk1.5.0_08/jre/bin
  set RXE_HOME=c:/Program files/Antenna/XSLReportDesignerV25

- Example of using .bat:
  rxe -layout mylayout.rxl -output mylayout.fo mydata.xml

In the above, "mylayout.rxl" is specified as project file,
"Mylayout.fo" is specified as an output file name, and "mydata.xml" is specified as XML data.

Start Option

-layout	This specifies project file.
-error	This specifies error file. If this is omitted, then the error messages will be output to standard error.
-output	This specifies output file. If this is omitted, then FO will be output to stardard output.
-verbose	This specifies verbose mode.
XMLDataFile	This specifies input XML data file. If this is omitted, then standard input will be used.

28 Command Line Interface

It's possible to start with a command line and specify the class of the runtime engine for the Java interpreter. It is assumed that java command is in the command search path.
It is also necessary to specify all jar files such as rxe.jar which are included in XSL Report Designer for CLASSPATH to execute it. (Or, please specify it by the parameter of "-cp" of Java option.) These jar files are in lib folder of the XSL Report Designer installation directory.
Please refer to rxe.bat or rxe.sh for the actual start method.

- How to call it.
  java jp.co.antenna.rx.rxe.rxe -layout LayoutFile [-error ErrorFile] [-output OutputFile] [XMLDataFile]

Start Option

-layout	This specifies project file.

-error	This specifies error file. If this is omitted, then the error messages will be output to standard error.
-output	This specifies output file. If this is omitted, then FO will be output to stardard output.
-verbose	This specifies verbose mode.
XMLDataFile	This specifies input XML data file. If this is omitted, then standard input will be used.

Return value

When it is a normal termination, 0 is returned. When it is not a normal termination, it returns the value excluding 0.

29 Java Interface

You can use runtime engine directly from your Java programs.

29.1 rxe

"rxe" is a class for using the runtime engine from Java.
The runtime engine can be executed by using the start option in the command line interface as a parameter.

Here is the sample code.
It is necessary to specify rxe.jar for CLASSPATH to compile.
It is necessary to specify all jar files which are included in XSL Report Designer for CLASSPATH to execute it. (Or, please specify it by the parameter of "-cp" of Java option.) These jar files are in "lib" folder of the XSL Report Designer installation directory.

```
// import XSL Report Designer classes
import jp.co.antenna.rx.rxe.*;

public class TestRxe {
    public static void main(String[] args) {
        // create rxe object.
        rxe myRxe = new rxe();

        // setting up parameters.
        String [] params = new String[3];
        params[0] = "layout.rxl";
        params[1] = "output.fo";
        params[2] = "xmldata.xml";

        // execute(generate) XSL-FO.
        boolean rslt = myRxe.subMain(params);

        // print result
        if (rslt) {
            System.out.println("OK");
        } else {
            System.out.println("NG");
        }
    }
}
```

Here is the API for rxe.

rxe

public rxe()
constructor.
subMain
public boolean subMain(java.lang.String[] argv)
sub main entry.subMain is commonly used rather than main.

- parameters:

  argv - command line options.

- return value:

  true if success, false if fail.

main
public static void main(java.lang.String[] args)
main entry.
subMain is commonly used rather than main. You should use this carefully because this will call System.exit().
And it's exit code is: 0 if success. 1 if fail.

- parameters:

  args - command line options.

29.2 RxEngine

"RxEngine" is a class to use the runtime engine from Java.
Differing from "rxe" that uses the start option in the command line interface as a parameter, "RxEngine" can do a more detailed control than "rxe" by using the method.

Here is the fragment of the sample code.
It is necessary to specify rxe.jar for CLASSPATH to compile.
It is necessary to specify all jar files which are included in XSL Report Designer for CLASSPATH to execute it.
These jar files are in "lib" folder of the XSL Report Designer installation directory.

```
// import XSL Report Designer classes
import jp.co.antenna.rx.rxe.*;

public class TestRxEngine {
    public static void main(String[] args) {
        // create RxEngine object.
        RxEngine eng = new RxEngine();

        // setting up parameters.
        eng.setLayoutLocation("layout.rxl");
        eng.setOutputLocation("output.fo");
        eng.setXMLDataLocation("xmldata.xml");

        // execute(generate) XSL-FO.
        boolean rslt = eng.execute();

        // print result
        if (rslt) {
            System.out.println("OK");
        } else {
            System.out.println("NG");
```

```
            }
        }
}
```

Here is the API for RxEngine.

RxEngine
public RxEngine()
constructor.
setLayoutLocation
public void setLayoutLocation(java.lang.String location)
Sets project file location.

- parameters:

  location - fullpath, filename, or complete URL.

setXMLDataLocation
public void setXMLDataLocation(java.lang.String location)
Sets location of XML data file.
If neither setXMLDataLocation nor setXMLDataStream is set, then the XML data is received from a standard input.

- parameters:

  location - fullpath, filename, or complete URL.

setXMLDataInputSource
public void setXMLDataInputSource(org.xml.sax.InputSource inputSource)
Sets input source of XML data file.
If neither setXMLDataLocation nor setXMLDataInputSource is set, then the XML data is received from a standard input.
Please refer to InputSource of org.xml.sax of J2SDK API for InputSource.

- parameters:

  inputSource - input source

setOutputLocation
public void setOutputLocation(java.lang.String location)
Sets output location.
If neither setOutputLocation nor setOutputStream is set, then XSL-FO is output to a standard output.

- parameters:

  location - fullpath or filename.

setOutputStream
public void setOutputStream(java.io.OutputStream outStream)
Sets output stream.
If neither setOutputLocation nor setOutputStream is set, then XSL-FO is output to a standard output.

- parameters:

  outStream - output stream.

setErrorLocation
public void setErrorLocation(java.lang.String location)
Sets error output location.

- parameters:

location - fullpath or filename. If this is null then the standard error will be assumed.

setLogger
public void setLogger(java.util.logging.Logger logger)

Sets logger.

You can set various options to the logger. It means that this method provides more flexible logging facility than setErrorLocation.

- parameters:

  logger - Java standard Logger object.

getLogger
public RXLogger getLogger()

Gets logger.

The RxLogger is subclass of Java standard Logger.

- return value:

  RxLogger

setVerbose
public void setVerbose(boolean flag)

Sets verbose mode. The default value is false.

- parameters:

  flag - true: verbose, false: non-verbose.

setNoWarning
public void setNoWarning(boolean flag)

Sets no warning mode. If the value is true then warning output will be suppressed.

The default value is false.

- parameters:

  flag - true: no warning mode, false: warning mode.

setStartPos
public void setStartPos(int x, int y)

Sets the print start position when the layout type is label.

For example, if the paper divided by 5 rows and 2 columns as follows:

```
      0          1
+----------------------+
|+--------+ +--------+|
||         | |         || 0
|+--------+ +--------+|
|+--------+ +--------+|
||         | |         || 1
|+--------+ +--------+|
|+--------+ +--------+|
||         | |         || 2
|+--------+ +--------+|
|+--------+ +--------+|
||         | |    S    || 3
|+--------+ +--------+|
|+--------+ +--------+|
||         | |         || 4
```

```
|+--------+ +--------+|
+----------------------+
```

setStartPos(1, 3) sets the print start position at the label marked 'S'.
The value is 0 origin.
This method valid only when the layout type is label.

- parameters:

  x - horizontal start position.

  y - vertical start position.

setRecordBuffers
public void setRecordBuffers(int n)

Sets the number of record buffer.
If you set a large number to parameter 'n' then the processing speed of runtime engine may increase, because the data reading thread will read more data at once. But it may cause out of memory error.
The default value is 100.

- parameters:

  n - the number of buffer.

execute
public boolean execute()

Executes generating FO.
Before calling this method, you must call setLayoutLocation, setXMLDataLocation, setXMLDataInputSource, setOutputLocation, setOutputStream etc. according to your needs.

Sample Files

30 Sample file list

Sample files are stored in the "Sample" folder of the installed folder. Sample files in Japanese are in the "Sample/Japanese" folder and there are sample files in English in the "Sample/English" folder.

Layout Type	Sample project file	Sample XML file
Fixed Type	order-fix.rxl / order-fix2.rxl	sample-data.xml
Flow Type	order-flow.rxl	
Label Type	label.rxl	

Also, there are the following sample.

Function	Sample project file	Sample XML file
Barcode	barcode-flow-repeat.rxl	barcode-data.xml
Expression	exp-sample1.rxl exp-sample2.rxl	sample-data.xml seiseki.xml
Control breaking and Collect	c-break.rxl	ctrl-break.xml
Sort and Grouping	sort-group.rxl	sort-group-data.xml
Dynamic property change	dyna-prop-fix.rxl dyna-prop-flow.rxl dyna-prop-order-flow.rxl	dyna-prop-seiseki.xml dyna-prop-seiseki.xml sample-data.xml

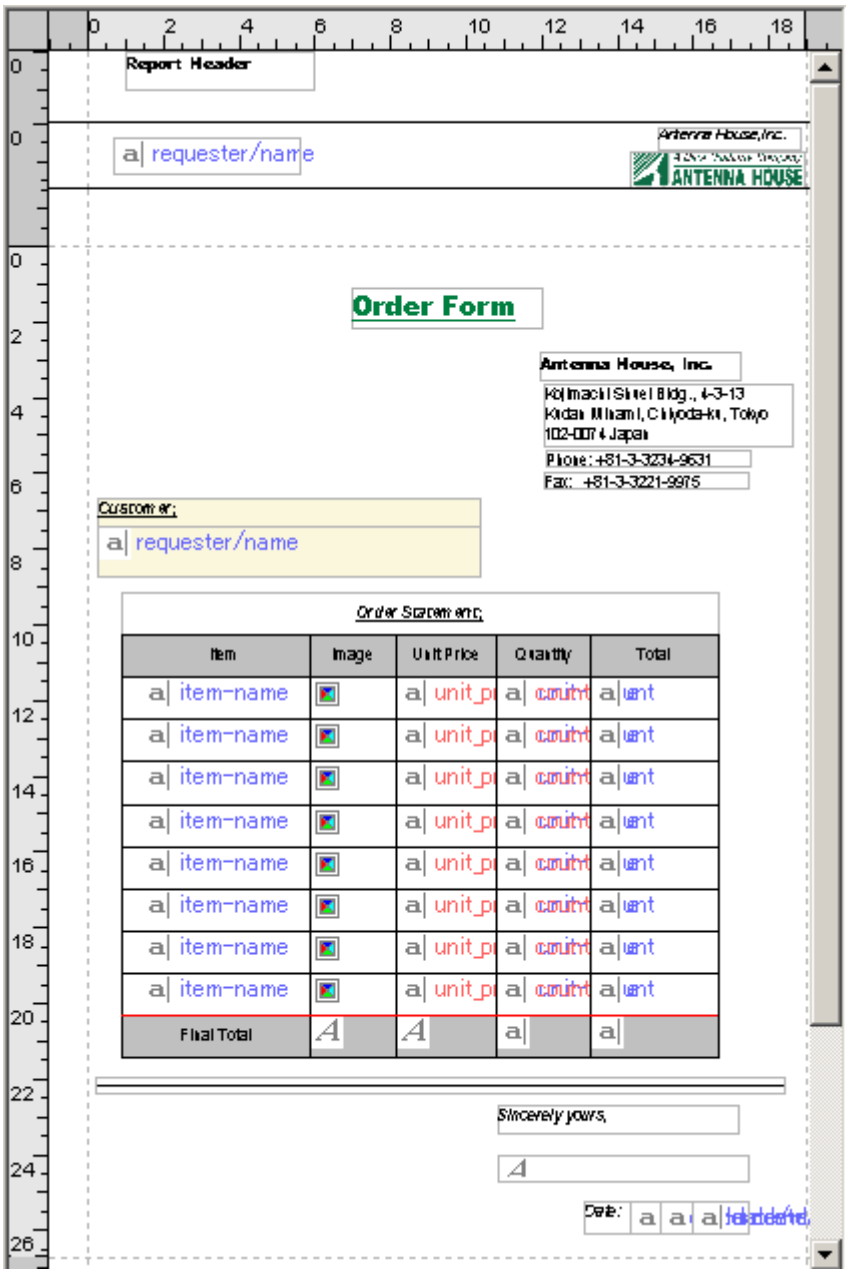
In each sample, the following functions are used.

Function	Discription
Report Header/Report Footer	Using a Report Header/Report Footer.
Page Header/Page Footer	Using a Page Header/Page Footer.
Font style (Font, Bold, Italic, Size, Underline, Color)	Each font style can be specified for object.
Background color	Background color can be specified for object.
Horizontal alignment/Vertical alignment	You can arrange the position of each object. (In a left/left/center or top/bottom/middle.)
Border (Style, Width, Color)	You can choose the style, width, and color for the border of each object.
Expressions	A total of a vertical, horizontal numerical value, a current date, and the page number, etc. are output by the expression.
Property expressions	The properties of objects(text color and background color etc.) can be changed dynamically.

31 For Fixed layout type

"order-fix.rxl" is the sample of a fixed layout type. This is a typical form for printing. On the GUI of XSL Report Designer, you can put each object at a fixed position in the area that is called a page. (On the GUI screen, the page looks like a piece of paper.) The part for the margins and page header / footer are text areas that are excluded from the paper.
The page header / footer and the report header / footer can be specified. Report header / footer always creates new pages. This effectively applies a cover page to the report.

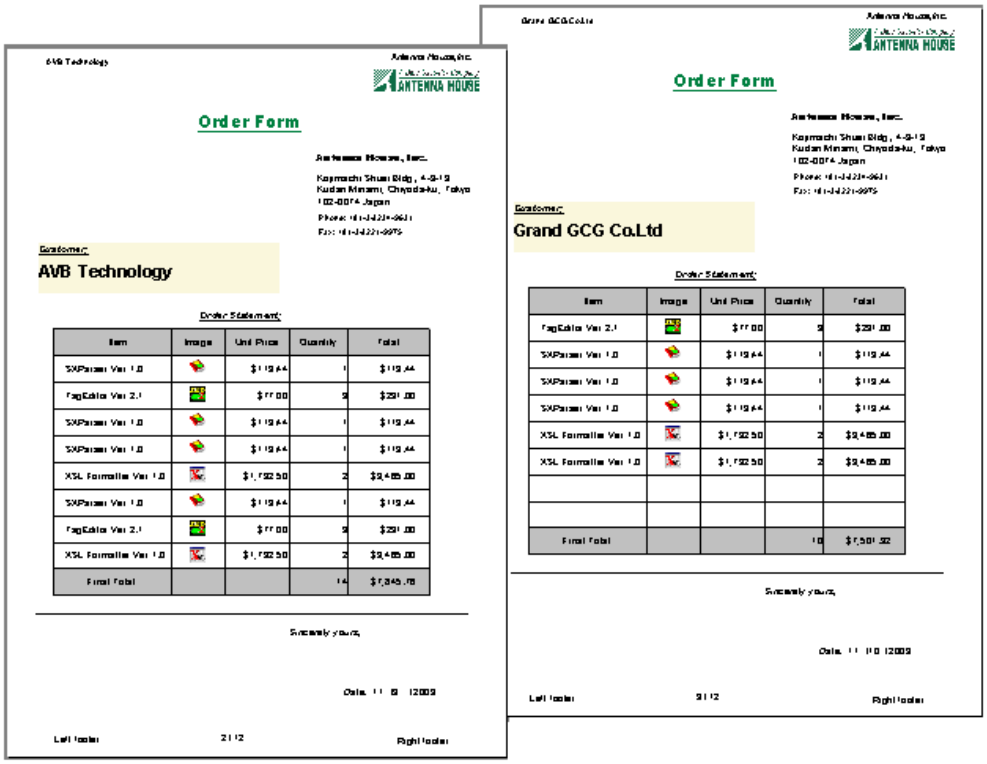
31.1 Sample Project File (order-fix.rxl)



When you choose "Static" in "Kind," the static character strings are always displayed.
In the sample file, "Order Form" , "Antenna House,Inc." and so on are static.
When you choose "Field" in "Kind," the reference data specified by XML path will be embedded. In the sample file, you can see "A" for the field. The cell of table is the same.
When you newly insert Table Objects dialogue for Table setup is shown. In this sample, we choose "Fixed" table which has the fixed number of rows (8) and columns (6). You can see it on "Table setup" dialogue opened from "Setting" of "Table edit" of "Object" menu.

31.2 Result FO File (order-fix.fo)

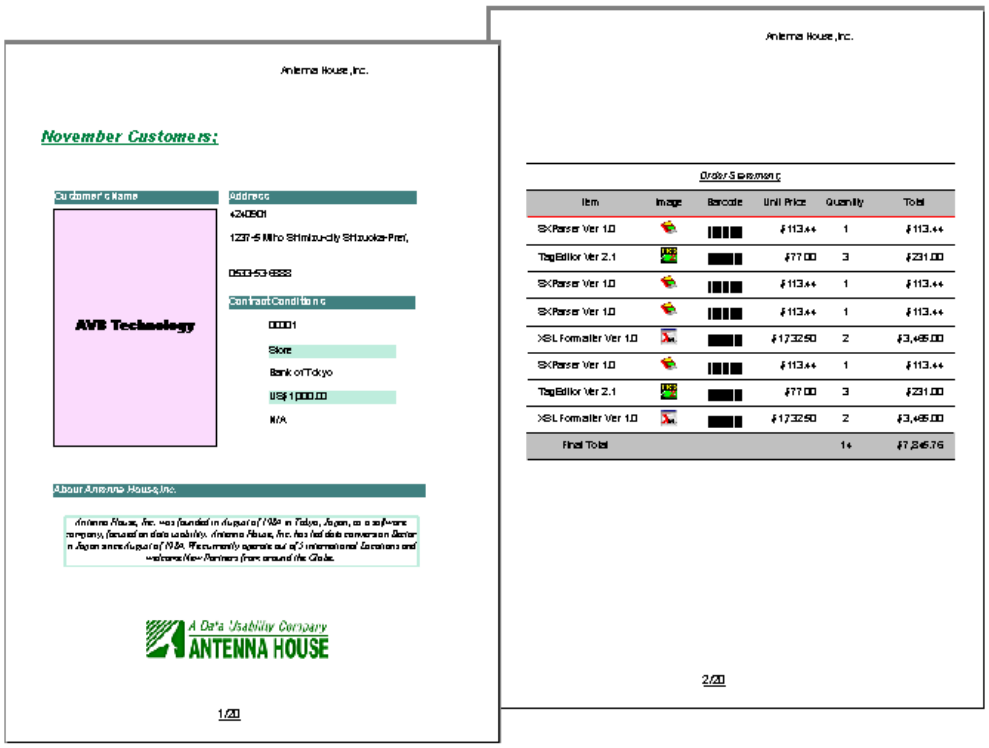
Combining with "sample-data.xml," this project file is outputted as the following formatted FO file: (Note: Antenna House XSL Formatter or AH Formatter was used to do the formatting)



By embedding corresponding data from XML file, "Field" areas now have data from the XML file.
As to the Fixed table, the table always keeps specified number of lines and columns.
If there are eight records in the repeat path, eight rows are full.
When there are more than eight records the additional lines will not be printed.

31.3 Result FO File2 (order-fix2.fo)

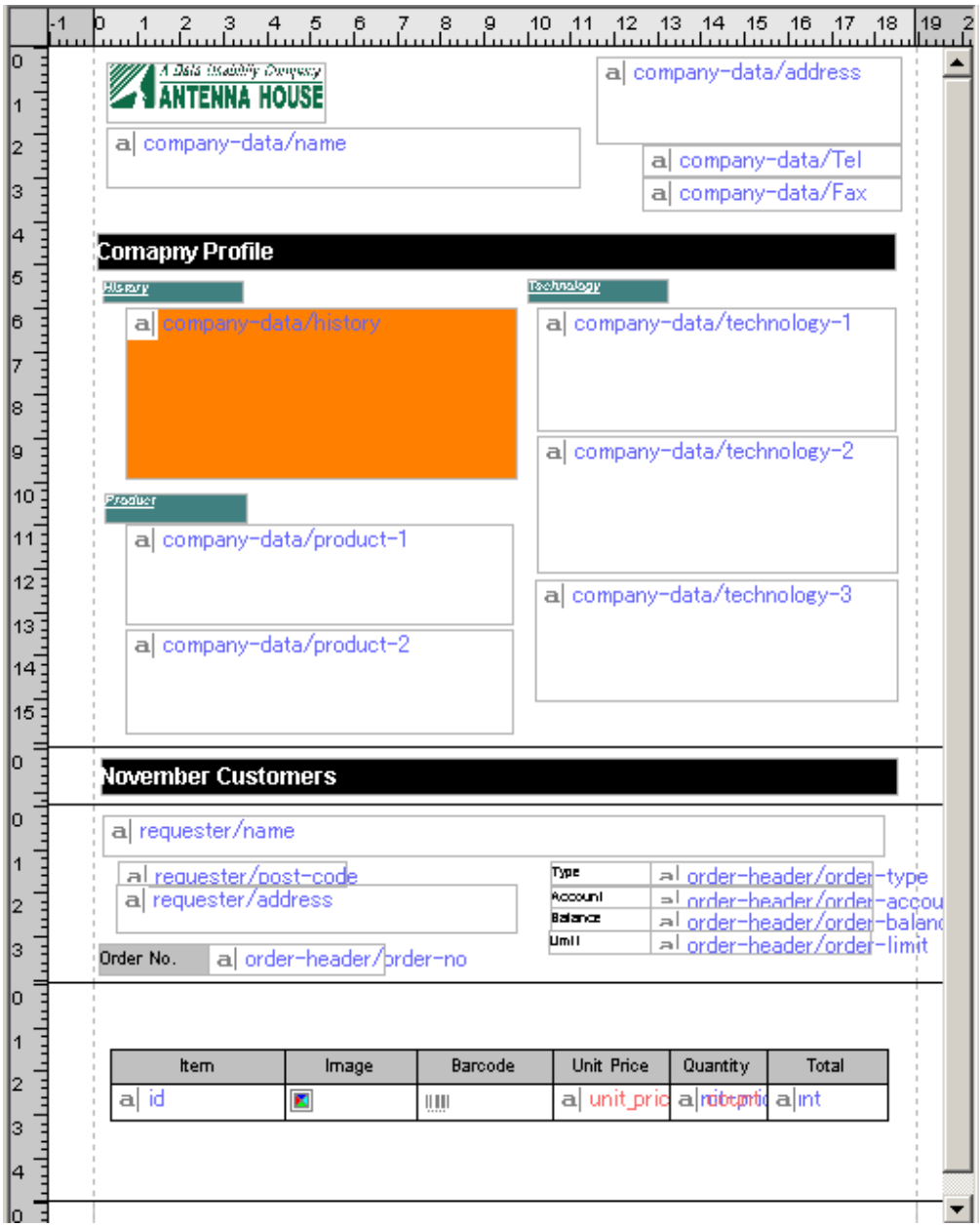
As you see in the sample of "order-fix2.rxl," one record of the database can compose multiple pages.
For instance, in the order form, the customer's information is in the first page and the second piece can be the form and more details.



32 For Flow Layout type

"order-flow.rxl" is the sample of Flow type.
This is the layout type where the object expands and contracts automatically based on the inside data.
You can arrange each object in the area that is called a frame. Multiple frames can be used and the objects can be grouped within frames. By making groups the objects in that group are able to flow as one mass. The page header / footer and the report header / footer can be specified. The layout can not be composed of multiple pages.

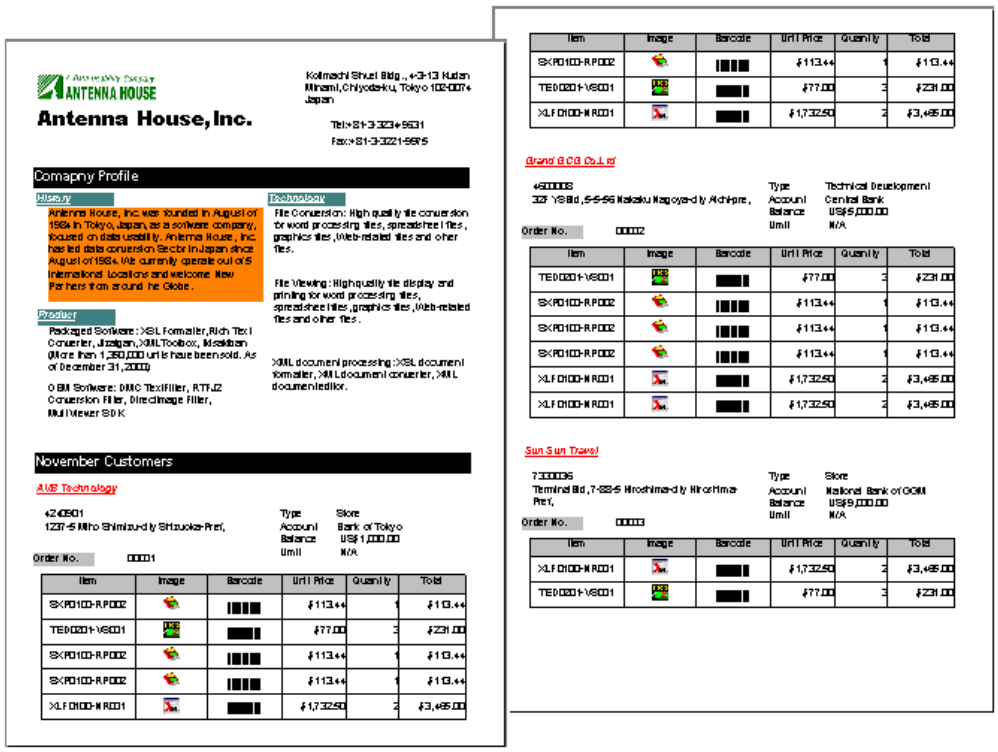
32.1 Sample Project File (order-flow.rxl)



In this sample, there are 5 frames. One is for the "Company Profile." The next is for the data of "November Customers."
The 3rd, 4th and 5th frames are in the "subrepeat" and are for the order information and the orderlist (table) of "November Customers."(The 5th frame is used for interval adjustment of next repeat.)
By seeing the "Objects tree" it would be easy to see the entire structure of this sample.
The first two frames appear once and are not repeated. The other 3 frames are repeatable depending on the number of orderlist in the XML file. We also use a "Variable" table which has 6 columns. How many rows appear depends on the XML data.

32.2 Result FO File (order-flow.fo)

Combining with "sample-data.xml," this project file creates the following output:



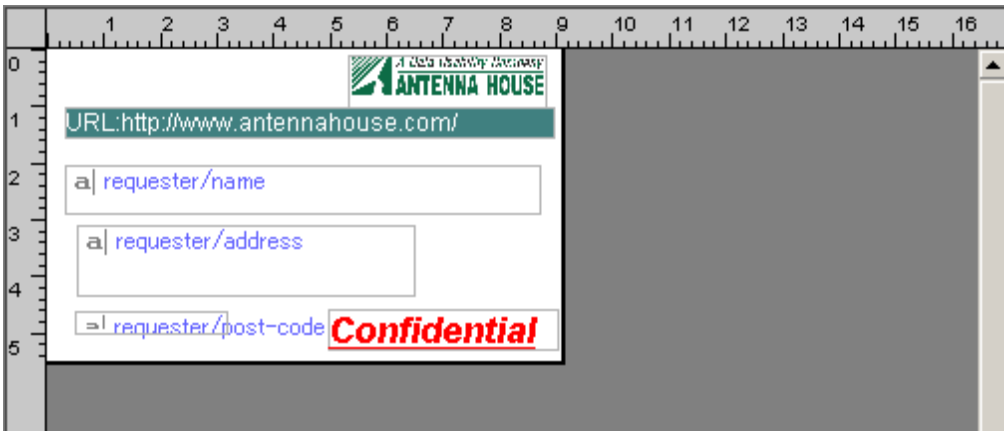
As you see from the above, the table expands and contracts according to the number of lines of data.
The position of the following objects changes accordingly. That is why it is called the flow type because the objects flow.

33 For Label Layout type

Label type looks a lot like a Fixed type. The big difference is that Label type can divide the page vertically and horizontally and the object is arranged in the one area. It is used when multiple records are sequentially printed on one form, The object of a fixed position and a fixed size can be arranged.

In the sample project file, "label.rxl," the page was devided in 5 lines (rows) and 2 columns. You can specify those in the dialogue of "Page setup."

33.1 Sample Project File (label.rxl)



33.2 Result FO File (label.fo)

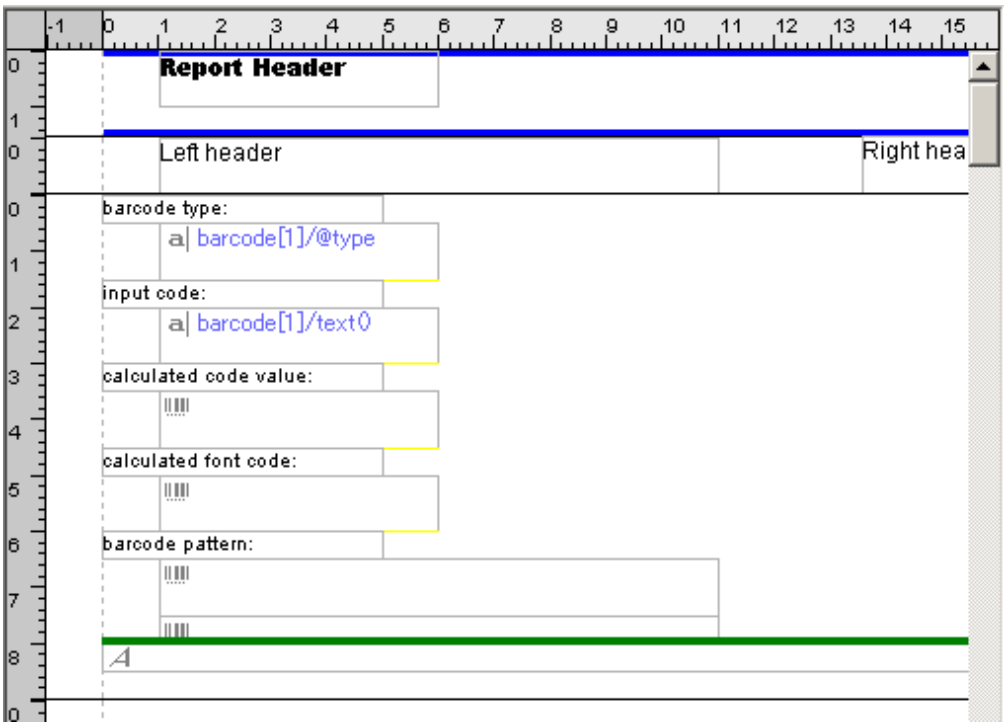
Combining with "sample-data.xml," this project file produces the following output:

34 Sample for Barcode

Note;
XSL Report Designer uses the font installed by the XSL Formatter Barcode Option or the AH Formatter Barcode Option. Please make sure that XSL Formatter Barcode Option is installed with your XSL Formatter, or AH Formatter Barcode Option is installed with your XSL Formatter.

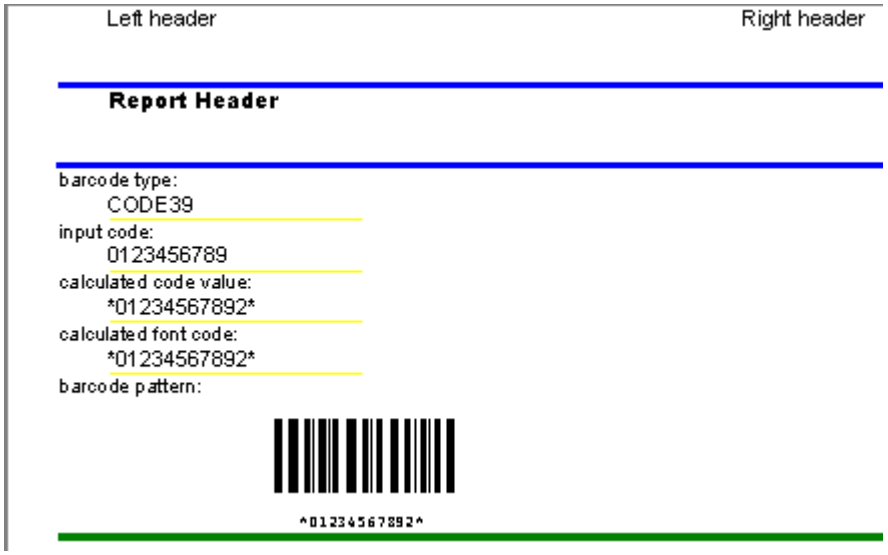
34.1 Sample Project File (barcode-flow-repeat.rxl)

Barcode object is used for the print of the barcode. You can put Barcode object, then specify the type and the font etc. of the barcode in property.



34.2 Result FO File (barcode-flow-repeat.fo)

Combining with "barcode-data.xml," this project produces the following output:



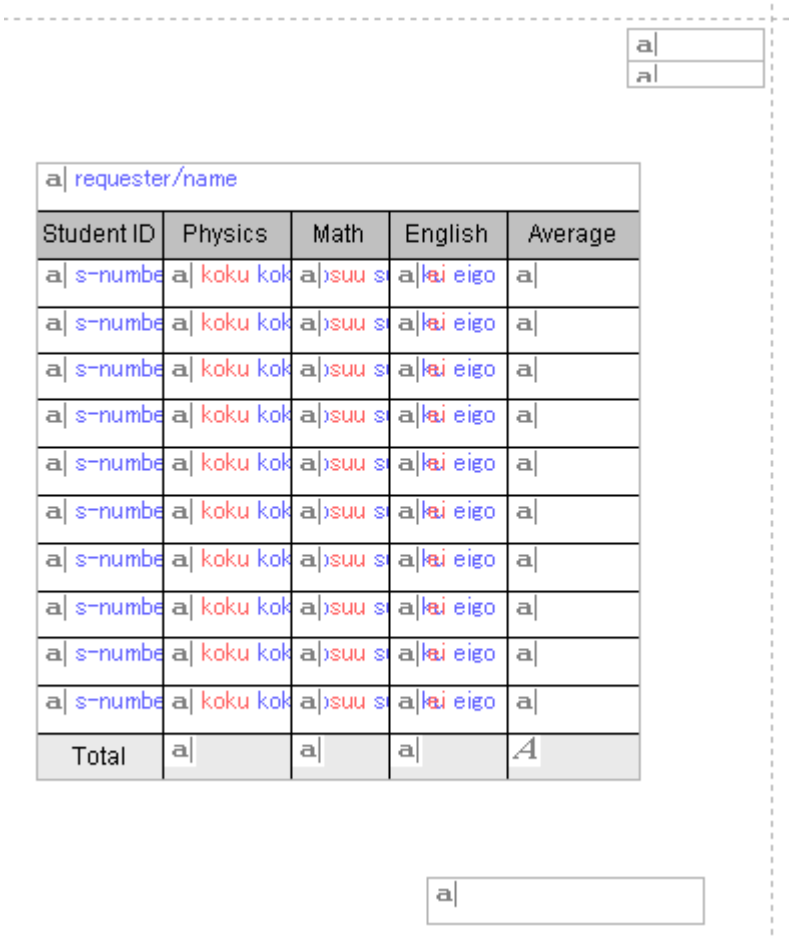
35 Sample for Expression

By setting the expression you can easily set a complex expression to automatically input the date, page number, column totals and so on. Please refer to the "Built-in Functions" for the available expressions.

35.1 Sample Project File (exp-sample2.rxl)

This sample uses the following built-in functions.

- hAvg
- totalSum
- date
- time
- currentPage
- totalPages
- dateCalc



35.2 Result FO File (exp-sample2.fo)

Combining with "seiseki.xml," this project produces the following output:

2004/11/17
05:36:14

3-A

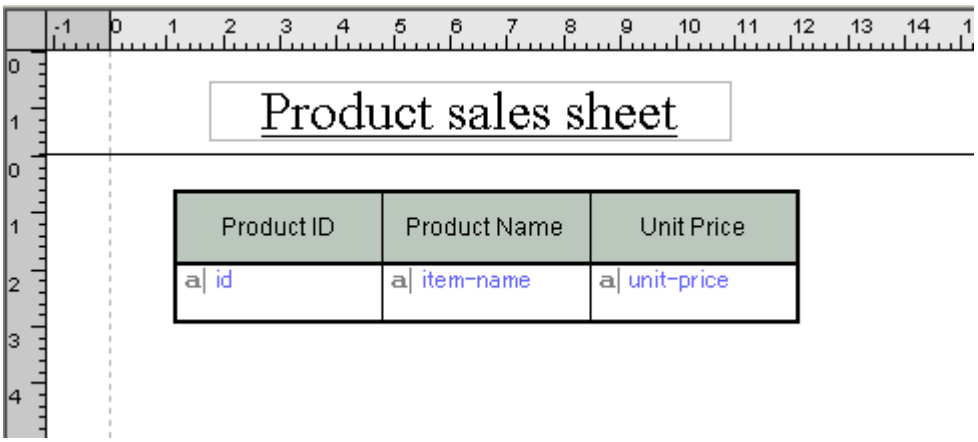
Student ID	Physics	Math	English	Average
1	30	45	52	42.3
2	40	61	52	51.0
3	34	51	75	53.3
4	72	80	85	79.0
5	34	15	51	33.3
6	61	91	95	82.3
7	75	100	65	80.0
8	40	18	51	36.3
9	52	81	65	66.0
10	74	65	53	64.0
Total	512	607	644	

today : 2004/11/17

36 Sample for Control break and Grouping

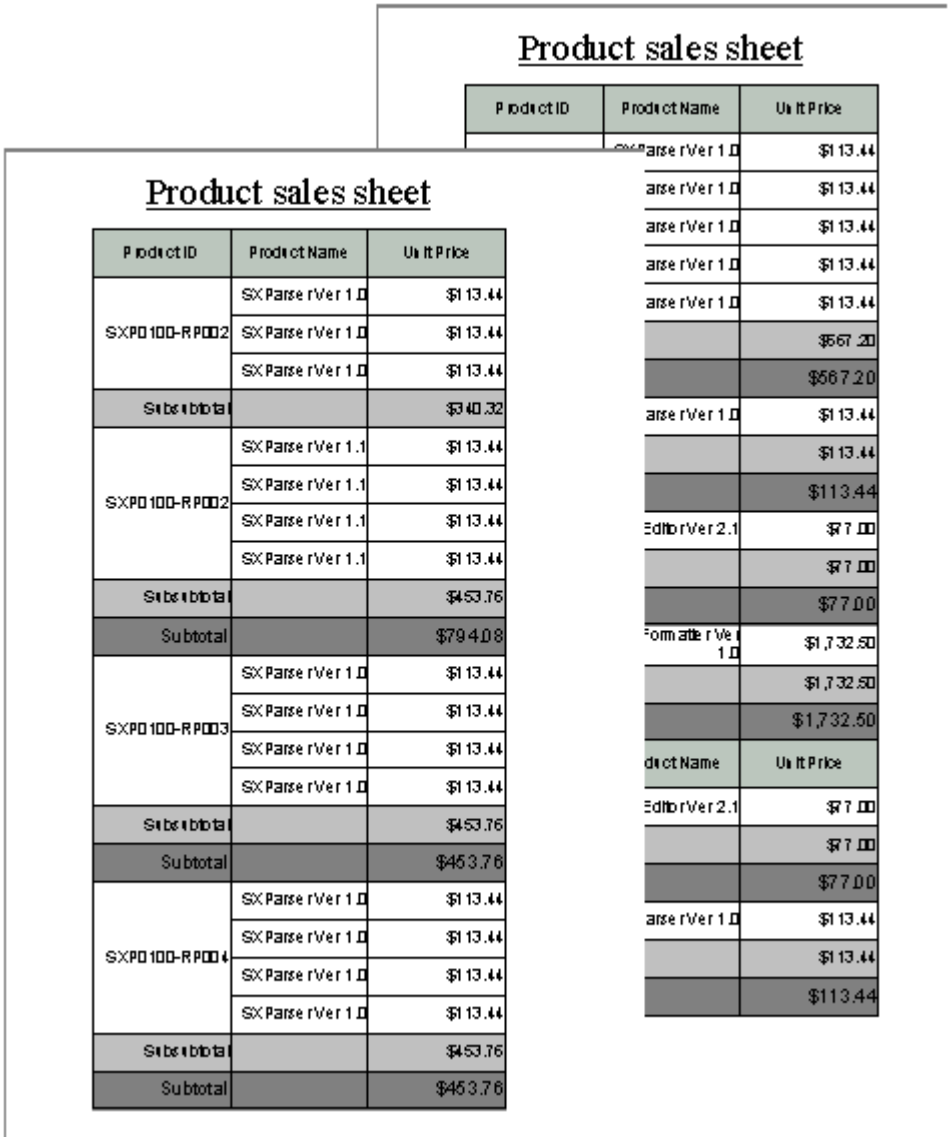
Control break is a function that totals the content of cells by the specified "Column number to judge for break." When the data that has the same content is used consecutively in the same column, you can bring those cell together and output it. This function is called Grouping. In the Set Grouping property, "Variable" groups and merges cells when the same data appears in the consecutive cell of the column. "Fixed" groups cells by the number of Rows property specified under Set Grouping. In this case, cells are not merged, and the border line is drawn.

36.1 Sample Project File (c-break.rxl)



36.2 Result FO File (c-break.fo)

Combining with "ctrl-break.xml," this project file produces the following output:



Product sales sheet

Product ID	Product Name	Unit Price
SXP0100-RP002	SX Parser Ver 1.0	$113.44
	SX Parser Ver 1.0	$113.44
	SX Parser Ver 1.0	$113.44
Subtotal		$340.32
SXP0100-RP002	SX Parser Ver 1.1	$113.44
	SX Parser Ver 1.1	$113.44
	SX Parser Ver 1.1	$113.44
	SX Parser Ver 1.1	$113.44
Subtotal		$453.76
Subtotal		$794.08
SXP0100-RP003	SX Parser Ver 1.0	$113.44
	SX Parser Ver 1.0	$113.44
	SX Parser Ver 1.0	$113.44
	SX Parser Ver 1.0	$113.44
Subtotal		$453.76
Subtotal		$453.76
SXP0100-RP004	SX Parser Ver 1.0	$113.44
	SX Parser Ver 1.0	$113.44
	SX Parser Ver 1.0	$113.44
	SX Parser Ver 1.0	$113.44
Subtotal		$453.76
Subtotal		$453.76

Product sales sheet

Product ID	Product Name	Unit Price
	arser Ver 1.0	$113.44
	arser Ver 1.0	$113.44
	arser Ver 1.0	$113.44
	arser Ver 1.0	$113.44
	arser Ver 1.0	$113.44
		$567.20
		$567.20
	arser Ver 1.0	$113.44
		$113.44
		$113.44
	Editor Ver 2.1	$77.00
		$77.00
		$77.00
	Formatter Ver 1.0	$1,732.50
		$1,732.50
		$1,732.50
	duct Name	Unit Price
	Editor Ver 2.1	$77.00
		$77.00
		$77.00
	arser Ver 1.0	$113.44
		$113.44
		$113.44

Revision

The revision history of XSL Report Designer is as follows.

37 V2.5 MR4 (Released on January 26, 2012)

The following functions were added.

1. Corrected an issue where an error would occur while previewing the document when 32bit AH Formatter/ XSL Formatter were installed on Windows 64bit.

38 V2.5 MR3 (Released on October 17, 2011)

The following functions were added.

1. Corresponds to AH Formatter V6.

39 V2.5 MR2 (Released on December 24, 2009)

The following functions were added.

1. When there was an expression in the text frame, the stylesheet was not outputted.

40 V2.5 MR2 (Released on November 24, 2009)

The following functions were added.

1. Some attributes of the text frame were not corresponded with the stylesheet output.

41 V2.5 MR2 (Released on October 21, 2009)

The following functions were added.

1. Corresponds to Windows 7.

42 V2.5 MR1 (Released on July 29, 2007)

The following functions were added.

1. Corresponds to AH Formatter V5.

43 V2.5 (Released on January 28, 2007)

The following functions were added.

1. The ability to use PDF as a base draft is added.
2. The ability to change the properties of objects dynamically.
3. Adds string related functions.

44 V2.1 (Released on June 1, 2007)

The following functions were added.

1. The ability to merge cells of the table is added.
2. The featrure to stick objects is added to the editing functions.
3. The ability to group objects is added.

45 V2.0 MR4 (Released on March 5, 2007)

The following functions were added.

1. Corresponds to Windows Vista.

46 V2.0 MR3 (Released on August 9, 2006)

The following functions were added.

1. Corresponds to XSL Formatter V4.

47 V2.0 MR2 (Released on November 30, 2005)

The following functions were added.

1. The output of the four (fundamental) rules of arithmetic to XSL stylesheet
2. The output of the page number to XSL stylesheet
3. Corrected the bug that the property for the arrangement of the vertical axis of image object did not work.

47.1 The output of the four (fundamental) rules of arithmetic to XSL stylesheet

With the previous versions, when the four (fundamental) rules of arithmetic is input to the object by using "Expression," they were not reflected in XSL stylesheet. In MR2, they are able to be output into XSL stylesheet.

Example 1
<data>
<UnitPrice>120</UnitPrice>
<Count>4</Count>
</data>

With the above XML data, you can obtain the output of "120 * 4 = 480" in XSL stylesheet. Make project file as follows and save it with "Save XSL stylesheet" in the File menu .

1. Input "UnitPrice" (the same as the element name) into "Variable name" property of the object that refers to <UnitPrice>.
2. Input "Count" (the same as the element name) into "Variable name" property of the object that refers to <Count>.
3. Input the calculation result as "UnitPrice * Count" into "Expression" property of the object that outputs the calculation result.

The operators that can be used are the following 5.

- Addition: +
- Subtraction: -
- Multiplication: *
- Division: div
- Remainder: mod

Example 2
<Mathematics>74</Mathematics>
<Science>65</Science>

<Music>60</Music>

By using the above XML data, you can obtain the average of three subjects, and output it to XSL stylesheet.

1. Input "(Mathematics + Science + Music) div 3" into "Expression" property of the object that outputs the calculation result.
2. Save the project by "Save XSL stylesheet" in the File menu. The arithmetic will be output to XSL stylesheet.

 Note;

1. The function cannot be used within the expression.
2. When one element is referred from multiple objects, and the four rules of arithmetic is operated by using those objects, the error "Overlapping variable name" is displayed on GUI. Even in this case, the arithmetic expression is correctly output to XSL stylesheet (However, the format by using that project file cannot be done).

47.2 The output of the page number to XSL stylesheet

With the previous versions, when "currentPage()" which is the function to get page number is input to the object by using "Expression," they were not reflected in XSL stylesheet. In MR2, it is able to be output into XSL stylesheet. It is actually converted into XSL-FO as "fo:page-number" and output.

48 V2.0 MR1a (Released on March 16, 2005)

The following functions were added.

1. Corrected the invalid attribute name of XSL Stylesheet output.

49 V2.0 MR1 (Released on February 22, 2005)

The following functions were added.

1. Adds sample xml files used in manual(help).
2. Adds 'variable name' property to image properties.
3. Corrected the bug that saving the diagonal line properties did not work.

50 V2.0 (Released on December 20, 2004)

V2.0 was released.

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