



i-net
Clear Reports
2017

i-net Designer

Technical Overview

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1 Content

i-net Designer is a tool for creating custom reports based on your enterprise data. This document describes the most important features and installation requirements of i-net Designer.

2 Introduction

2.1 What to know about i-net Designer

With i-net Designer you will get one tool to access, calculate and analyze your enterprise data and create challenging and feature-rich reports in a professional way. Benefit from following i-net Designer features:

- Data access to every data source accessible by JDBC or ODBC
- Report Wizard to assist you while creating report templates
- Simple and intuitive report design by dragging and dropping data, design and representation elements
- Many different data, design and representation elements such as charts, cross tabs, text elements, sub reports, special fields, images or lines and boxes
- Powerful but simple formula language for creating custom formulas and data transforms with more than 400 predefined functions, expressions, constants and control structures
- Flexible, dynamic, and interactive reports by use of parameter fields and setting report options by formulas
- Report and data arrangement by several footers, headers or grouping sections
- Export to several formats, such as *.pdf, *.html, *.xls or ...
- Reading capability for reports from Crystal Reports
- 100% Java product, free information delivery to all platforms

2.2 Designing reports

Designing a report with i-net Designer is a simple three step procedure:

1. Choose and configure your data source (if needed).
2. If needed, create custom elements such as SQL queries, formula fields or parameter fields
3. Drag and Drop elements from i-net Designer field browser and arrange them as you like it in i-net Designer design area.

Result can be reviewed in an i-net Designer preview and exported to one of the export formats.

2.3 Installation requirements

The one and only requirement to run i-net Designer is a Java Runtime Environment 7 (or higher).

3 i-net Designer features

The following sections give you a short outline of some of the most important features of i-net Designer.

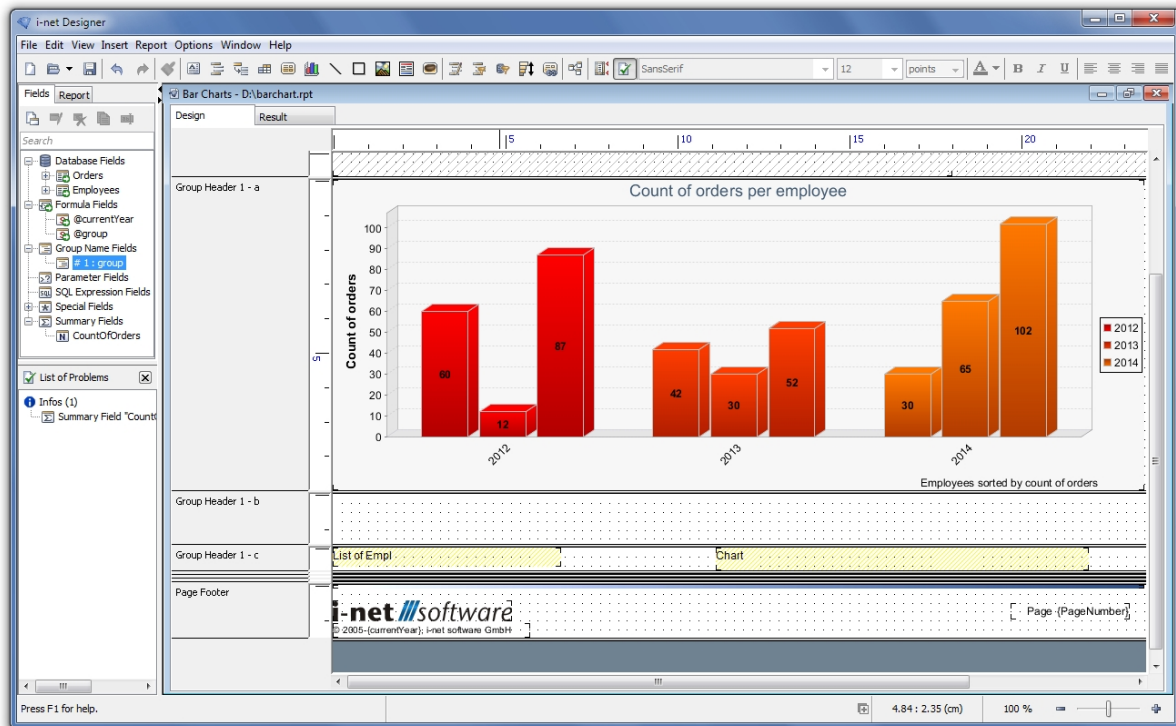


Figure 1: i-net Designer - Graphical User Interface

First, the above image 1 shows the graphical user interface of i-net Designer. In the frame on the right side you can see the report design area. Most report elements are taken from the field browser on the left side and are arranged in the design area by dragging and dropping them there. Further functionality is available from the menu or the tool bar.

3.1 Database Wizard

As soon as you have selected your report data source i-net Designer shows the Database Wizard to set up tables and table relations. As

following image 2 shows, simply drag and drop field relations and set the relation type.

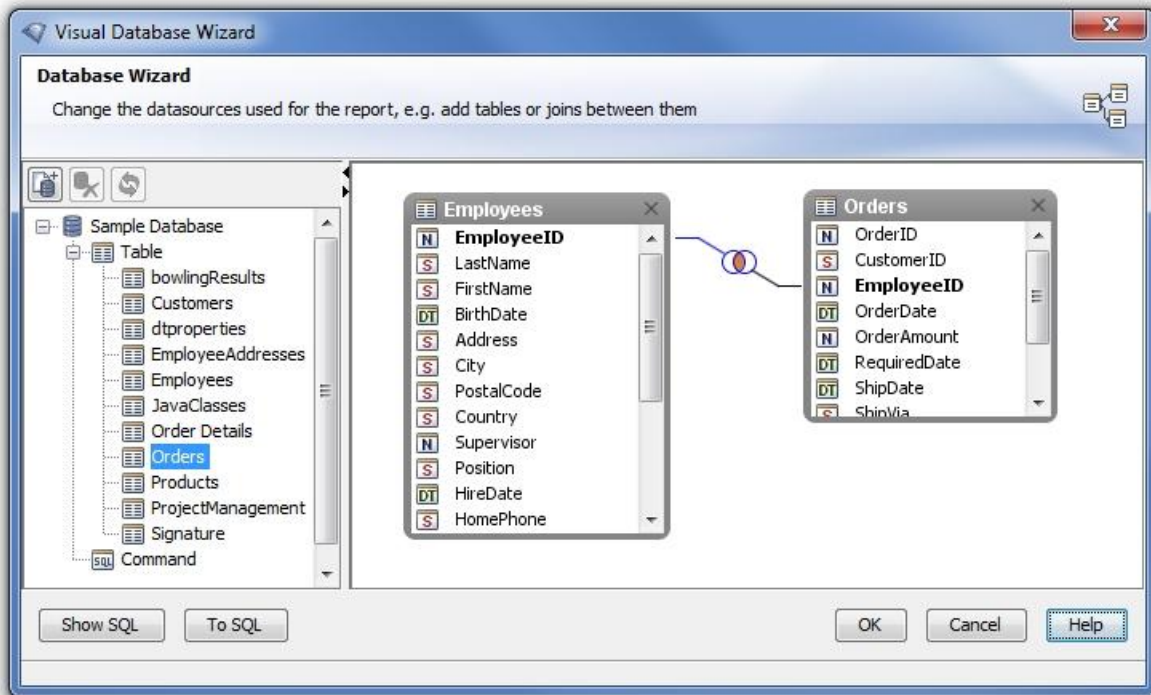


Figure 2: Database Wizard

3.2 Page layout / sections

Every report may be divided into several sections. At the very least, each report has a report header and footer, a detail section, and a page header and footer. But this can be enhanced. As following image 3 shows, you can insert your own sections and customize every section for its own by using i-net Designer section properties.

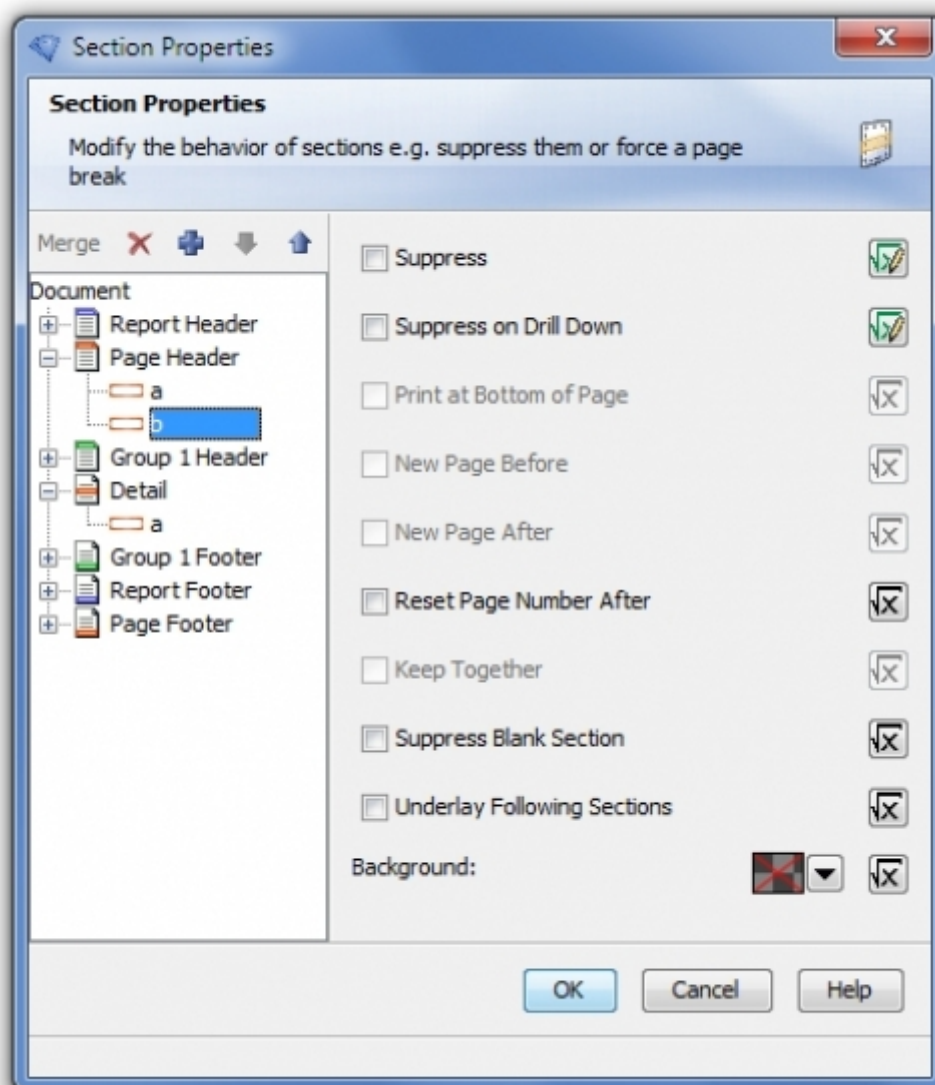


Figure 3: Section Properties

If you have groups in your report (see section [Grouping](#)), there are group headers and footers as well.

3.3 Fields

Data fields are an essential part of every report to represent your enterprise data. In i-net Designer those fields are taken by dragging and dropping them from the field browser (see following image [4](#))

and arranging them in the design area.

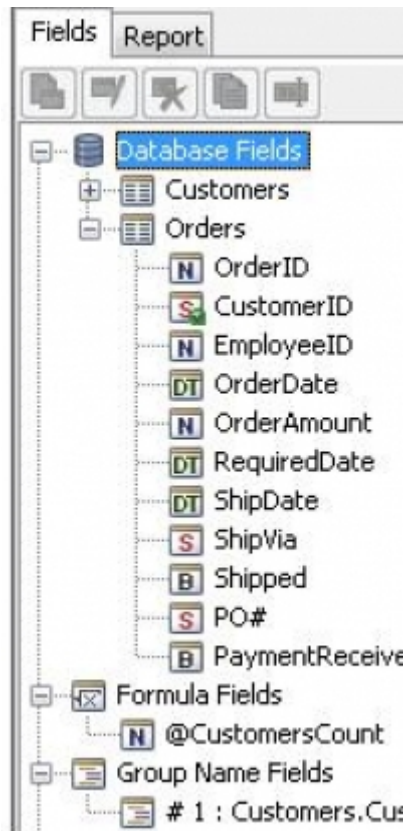


Figure 4: Fields Browser

For every field there are a lot of options to set, such as font, border, color or format options. The following field types are available.

3.3.1 Database Fields

A database field represents data from a table column of your configured data source. Let's assume there is a table with products and prices in your data source and you would like to have a report with products and prices. In this case, you'd configure this data source and drag the database fields to your report detail section.

3.3.2 Formula Fields

By using formula fields you can create your individual data

calculations and transformations. To create these fields, i-net Designer provides a formula editor with a powerful formula language. There are more than 400 predefined functions, expressions, constants or control structures to make your custom formula field possible.

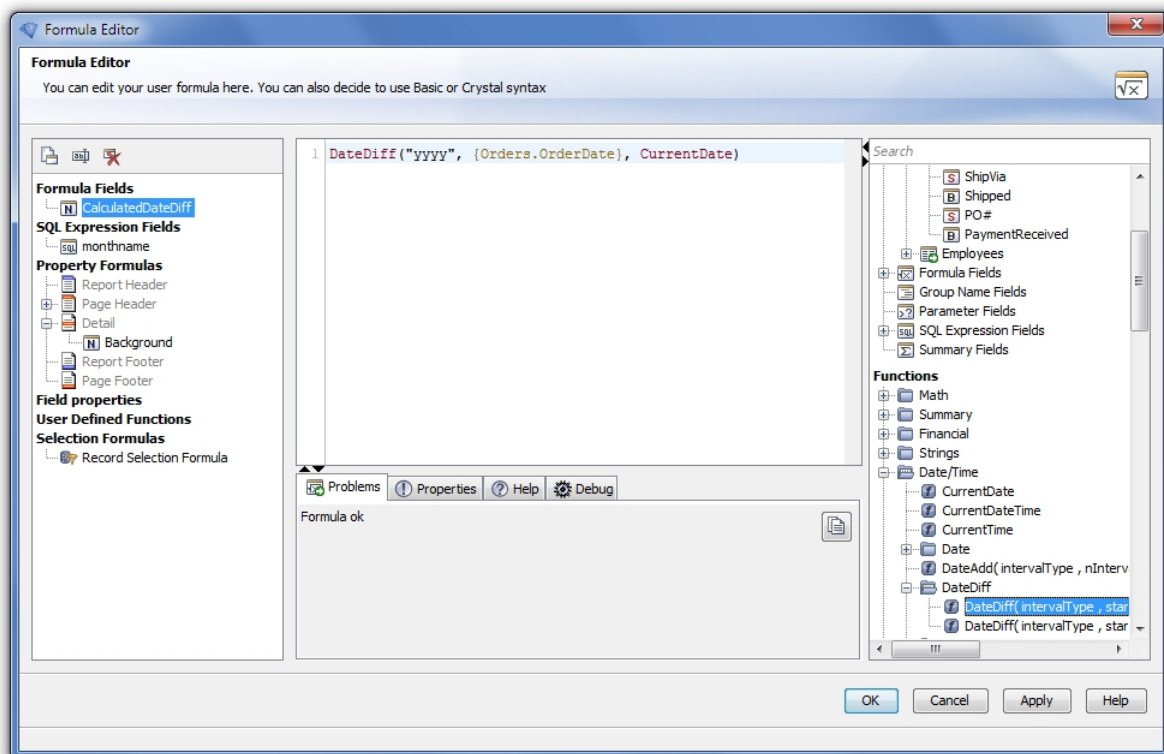


Figure 5: Formula Editor

The above image 5 shows a very simple sample. Using the DateDiff operation from a database field "Orders.OrderDate" the difference is calculated.

3.3.3 Parameter Fields

A parameter field allows interaction and gives the user more flexible and customized reports. By defining a parameter field for a report every time a user requests or refreshes this report the parameter will be prompted.



Figure 6: Report Parameter Prompt

So if you designed a report about last year's enterprise sales you could create a parameter field for the year and show sales only for the user prompted year. Another example is to suppress specific report elements corresponding to a given user prompt.

3.3.4 Special Fields

To add common information to your report, i-net Designer provides special fields. Examples are print date, page numbers, report author or report creation date. Currently there are 24 special fields available in i-net Designer.

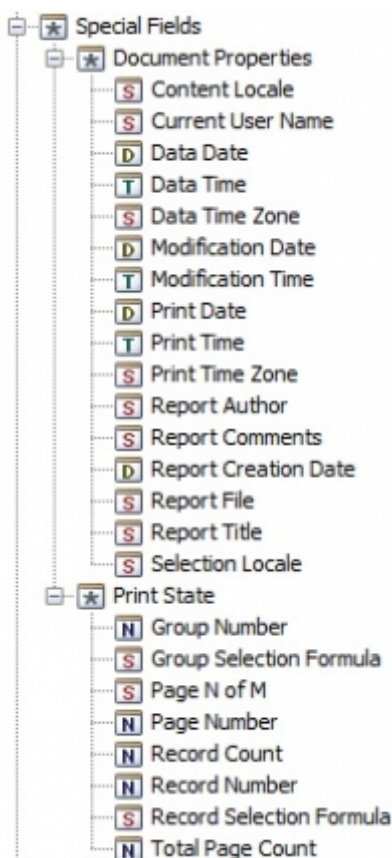


Figure 7: Special Fields

3.3.5 Summary Fields

A summary field is a field that returns a calculated value from the records either of a group (for grouping see chapter "[Grouping](#)") or of all report records. For example, if you have a list of your enterprise product sales, a summary field could calculate the total sales. Simply calculating a sum is one of the simplest summary operations, however. Currently there are 19 operations available such as average, median, covariance, nth largest or sample standard deviation.

3.3.6 SQL-Expression Fields

An SQL Expression field is a type of database field. The difference is that the SQL-Expression field is a link to a native SQL expression, not

to a single table column. So, use for an SQL-Expression purpose would be applying non-standard functions of your specific database management system such as generating sequences. Another purpose would be for speeding up database queries. Using the SQL-Expressions editor, as seen in the following image 8, for creating SQL-Expression fields is quite simple.

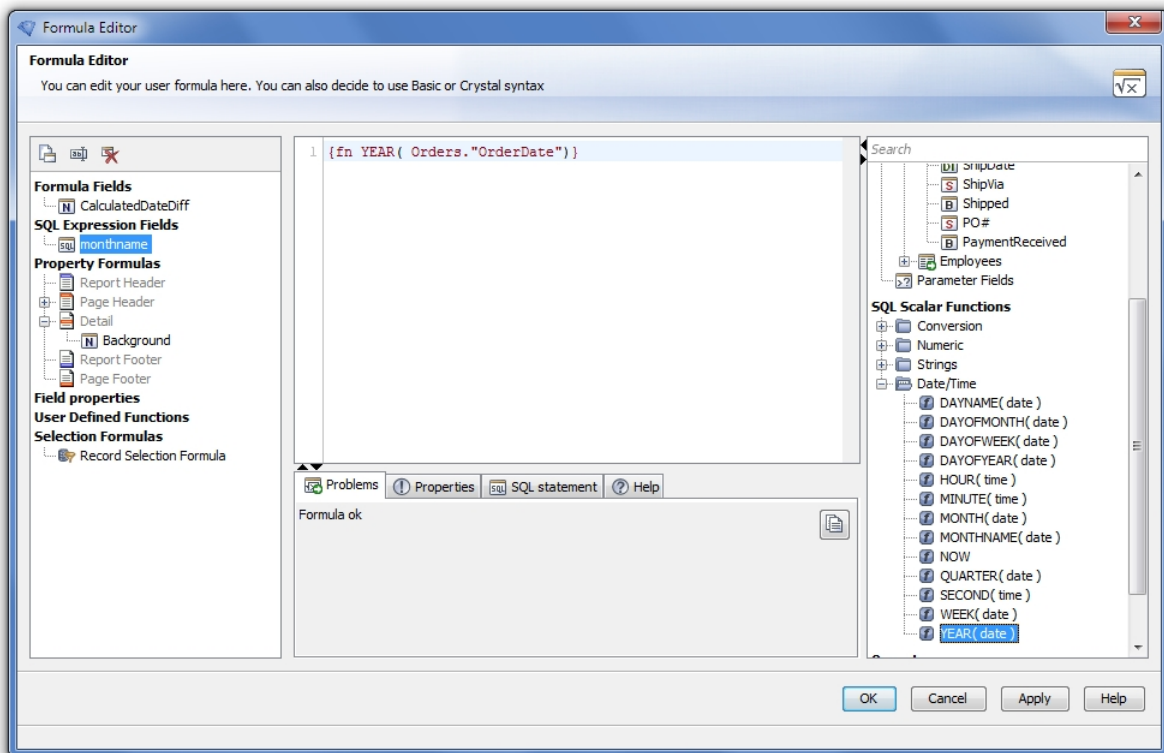


Figure 8: SQL-Expression Editor

3.3.7 Group Name Fields

A group name field is a design element that returns the name of a group (for grouping see chapter "[Grouping](#)").

3.4 Elements

Representing data in fields is important but professional and effective reports need more than this. Therefore i-net Designer

additionally provides the following powerful design and representation elements.

3.4.1 Cross Calculated Tables (Cross Tabs)

Using a cross tab is an effective way to represent and calculate complex data coherences. Each dimension of a crosstab can be determined by one or more variables resulting in one compound variable. For each pair of compound variables you can calculate a summary value which is printed at the corresponding location.

	Davolio	Fuller	Leverling	Peacock	Ergebnis
Alfreds Futterkiste	4,00	0,00	2,00	3,00	9,00
Blauer See Delikatessen	0,00	0,00	2,00	1,00	3,00
Die Wandernde Kuh	3,00	4,00	0,00	4,00	11,00
Drachenblut Delikatesser	3,00	0,00	1,00	3,00	7,00
Frankenversand	14,00	0,00	0,00	17,00	31,00
Königlich Essen	13,00	3,00	6,00	3,00	25,00
Lehmanns Marktstand	0,00	4,00	9,00	11,00	24,00
Morgenstern Gesundkost	0,00	2,00	3,00	2,00	7,00
Ottilies Käseladen	2,00	4,00	3,00	14,00	23,00
QUICK-Stop	10,00	18,00	19,00	14,00	61,00
Toms Spezialitäten	0,00	2,00	5,00	1,00	8,00
Ergebnis	49,00	37,00	50,00	73,00	209,00

Figure 9: Cross calculated table

3.4.2 Charts

For graphical representation of your enterprise data, i-net Designer offers 46 different chart types. Every chart type may be customized by a multitude of settings. Example chart types are bar, line, area, 3d surface, radar or bubble.

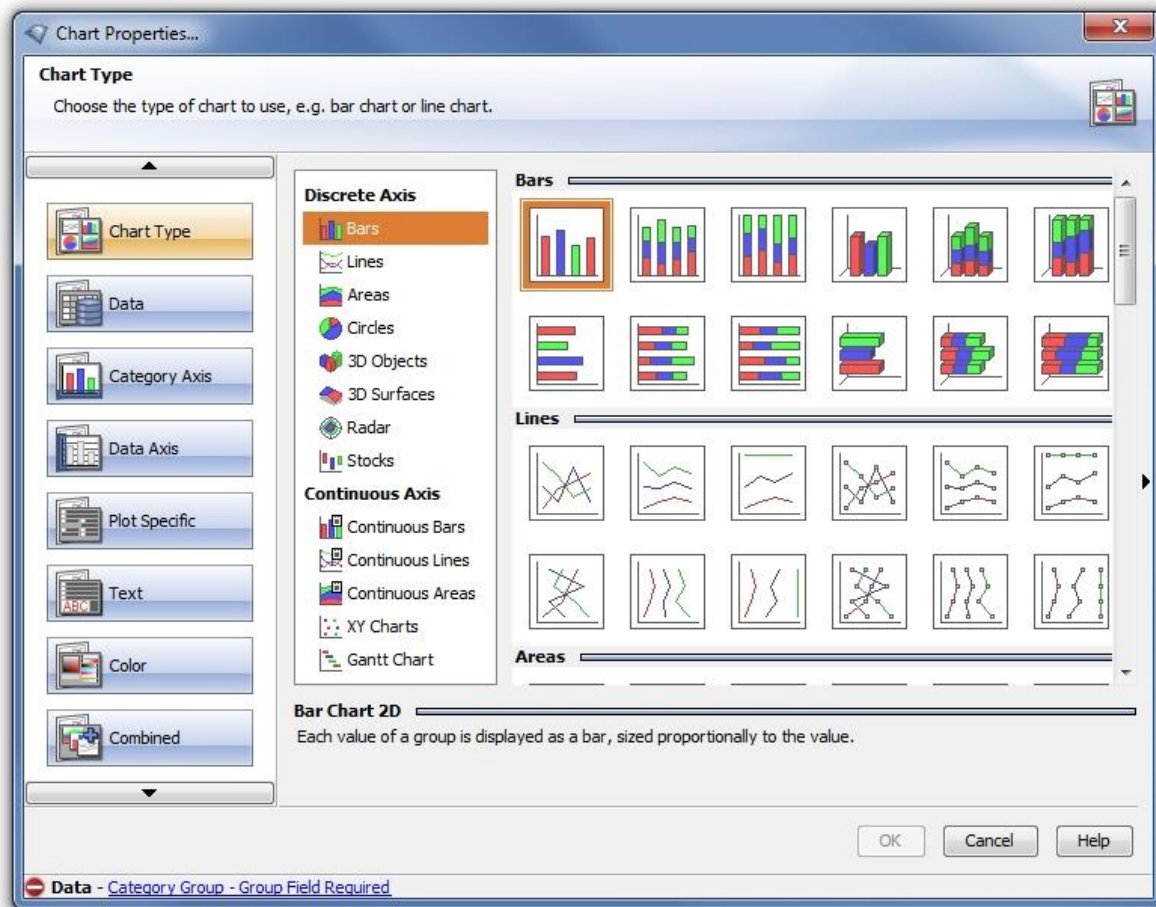


Figure 10: Chart Properties

3.4.3 Sub-Reports

A sub-report is a completely separate report as part of the main report. This is very helpful for creating reports with an 1:m correlation. The only difference to a normal report is the missing page header and footer. A sub-report may be marked to be rendered on demand, so that it is not really a part of the resulting report but a separate report reachable by a link.

3.4.4 Pictures, Text Fields, Lines and Boxes

Other graphical elements for customizing your report are pictures, text field, lines and boxes. Simply arrange them per drag and drop in

your report.



3.5 Grouping

Another function to structure your data representation is grouping. Grouping means aggregating elements by a certain criterion. In the report you will get a number of bundled elements in a certain sort order. A simple example may be grouping enterprise customers by country, as showed in the following image [11](#).

Group Tree	
Report1	
└─ Australia	
└─ GB	
└─ Germany	
└─ USA	

Australia	
TDM GmbH	(859)555-964
SYD GmbH	(840)555-794
TEW GmbH	(810)555-883
GBS Inc.	(284)555-842
NID Inc.	(885)555-164
EIQ Inc.	(399)555-772
CFT Inc.	(360)555-735
TMV Inc.	(480)555-803
VOL Inc.	(172)555-632
TSY GmbH	(188)555-747
FBO Inc.	(293)555-709
VDV Inc.	(805)555-744
RLZ Inc.	(775)555-710
GRI Inc.	(414)555-185
GB	
Futue Tek	(387)555-842
Germany	
MQM Inc.	(874)555-979

Figure 11: Grouping

But it is also possible to create a group hierarchy like grouping sales by countries and customers. If a group hierarchy exists in your

report, so-called "drill down" operations are possible. That means suppressing information from lower group hierarchy levels and drilling down to this information (making it visible) only when needed. Referring to the example grouping sales by countries and customers, customer sales would be suppressed by default, but a report user could drill down to these sales if wanted.

3.6 Customizing i-net Designer Settings per Formula

Formulas can not only be used for calculating or transforming your enterprise data but also for customizing nearly every setting for the various i-net Designer fields and elements.

The example in the following image 12 shows how simple it is to change font color of a field depending on a field value.

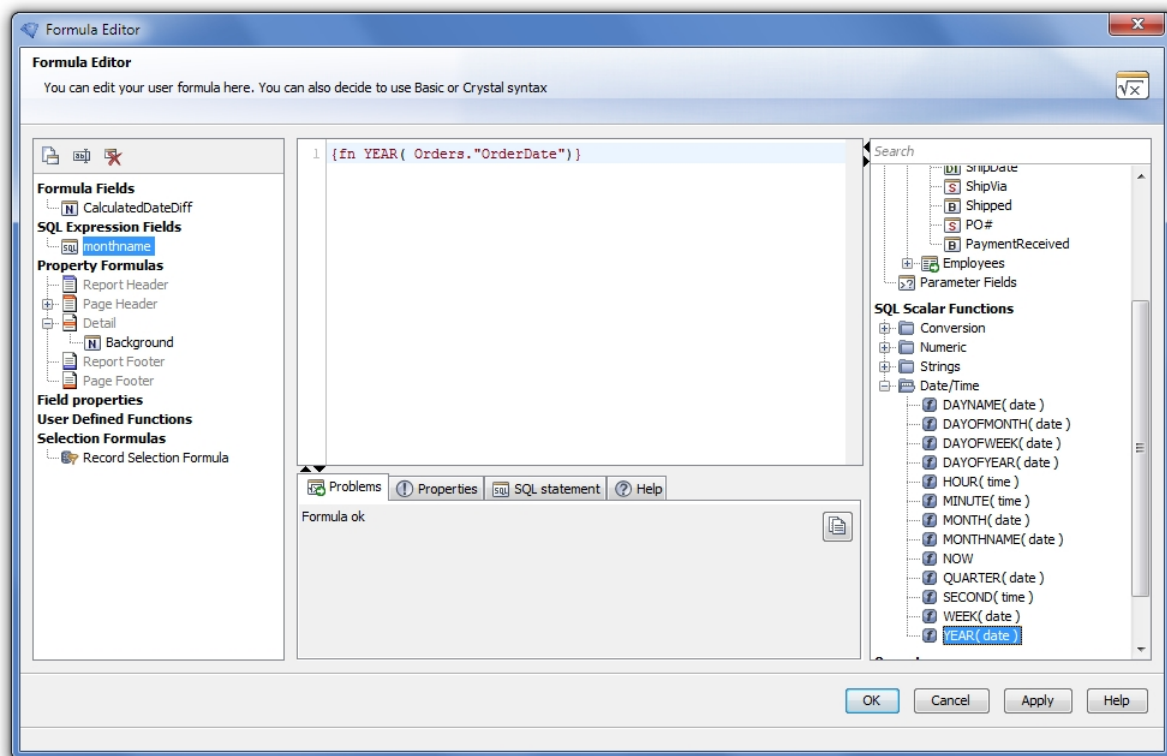


Figure 12: Property Formula

4 Technical Overview

Database Support, Database Access	
⇒ Support for all JDBC accessible data sources	✓
⇒ Support for all ODBC accessible data sources	✓
⇒ Database Wizards to set up data sources, tables and table relations	✓
⇒ Support for reusable Data Sources	✓
⇒ Customized SQL database queries	✓
Report Design	
⇒ Simple, intuitive drag and drop report design	✓
⇒ Undo / Redo functions	✓
⇒ Wizard supported design	✓
⇒ Report and grouping sections, headers and footers	✓
⇒ Online documentation	✓
Design and Data Elements	
⇒ Database fields	✓
⇒ Special fields	✓
⇒ SQL-Expression fields	✓
⇒ Cross calculated tables	✓
⇒ Charts	✓
⇒ Sub-reports	✓
⇒ Images, lines and boxes	✓
Data Calculating, Transforming and Grouping	
⇒ Summary fields	✓
⇒ Formula fields	✓
⇒ Formula language and editor with more than 400 predefined elements	✓
⇒ Hierarchical data grouping and sorting	✓
Flexibility, Viewing and Export	
⇒ User interaction by parameter fields	✓
⇒ Setting report element options by formulas	✓
⇒ Sub reports on demand	✓
⇒ Element hyperlinks and tool tips	✓
⇒ Drill-Down operations	✓
⇒ Export to several formats, like PDF, RTF, HTML, ...	✓
⇒ Reading capability for Crystal Reports	✓