

Delivering information in cross platform environments with Fast Reports' tools

Michael Philippenko
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Fast Report 5 VCL

new features and "smart objects"

Changes in the reports' files format

Saving collections and nested objects to XML



The advantages of the improved format

- readable format (version control)
- generation of template by any XML parser
- Improved templates inheritance

Format Compatibility
convertor



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Nested collections

```
<TfrxReport Version="5.0a" DotMatrixReport="False" TniFile="\Software\Fast Reports" PreviewOp
PrintOptions.Printer="Default" PrintOptions.PrintOnSheet="0" ReportOptions.Author
ReportOptions.ConnectionName="FR Demo Base" ReportOptions.CreateDate="77874,99265
ReportOptions.Description.Text="Demonstrates how to use charts." ReportOptions.No
ReportOptions.LastChange="40639,4197274769" ReportOptions.VersionMinor="0" Report

<Scriptext>
  begin end.
</Scriptext>
<DataSets>
  <TfrxDatasetItem Dataset="Area" DataSetName="Area"/>
  <TfrxDatasetItem DataSet="AreaPopulation" DataSetName="AreaPopulation"/>
  <TfrxDatasetItem DataSet="Country" DataSetName="Country"/>
  <TfrxDatasetItem DataSet="Population" DataSetName="Population"/>
</DataSets>
<Variables>
  <TfrxVariable Name="Database" Value=""/>
  <TfrxVariable Name="PathToDatabase" Value="..\demo.rdb"/>
</Variables>
<TfrxDataPage Name="Data" Height="1000" Left="0" Top="0" Width="1000">
```

and objects in XML

```
<TfrxChartView Name="Chart2" Left="11,33859" Top="483,77984" Width="718,1107"
  <chart Left="0" Top="0" Width="400" Height="250" AllowPanning="pmNone" Allow
    BackWall.Brush.Color="16777215" BackWall.Brush.Style="bsClear" BackWa
    FootL.TextL.Text="" GradientL.EndColor="0" LeftWall.ParentChart="Chart1"
    Title.Font.Height="16" Title.Font.Name="Arial" Title.Font.Style="1"
    AxisVisible="False" BottomAxis.Increment="0" BottomAxis.StartPosition
    DepthAxis.Increment="0" Frame.Visible="False" LeftAxis.Increment="0"
    RightAxis.Increment="0" RightAxis.StartPosition="0" RightAxis.Positio
    TopAxis.PositionPercent="0" View3DOptions.Elevation="315" View3DOptio
    View3DOptions.Rotation="360" View3DWalls="False" BevelOuter="bvNone"

    <Series>
      <TPieSeries Marks.AnnulLength="15" Marks.Visible="True" SeriesColor="255"
        PieValues.DateTime="False" PieValues.Name="Pie" PieValues.Mul

    </Series>
  </chart>
  <SeriesData>
    <TfrxSeriesItem DataType="dtDBData" DataSet="Area" DataSetName="Area" Sorti
      Source2="Area."Area"" XSource="Area."Name"" YSource="Area."

  </SeriesData>
```



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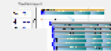
Changes in the components architecture

- changing the properties of components
- Processing of interactive events
- Saving of nested properties



Changes in the architecture of the engine

- A new breakdown of the objects
- detailed reports 
- Data Filtering
- the merge of duplicate fields
- hierarchical reports 
- Improved report inheritance
- removed vertical bands



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- **Hyperlink {DetailPage, DetailReport, URL, Anchor, PageNumber, Custom}**
- **Highlight {item1, item2 ...}**
- **DisplayFormat {item1, item2 ...}**
- **Fill {GradientFill, GlassFill, BrushFill}**
- **SuppressRepeated {Show, Hide, Merge, Clear}**
- **Printable {OnPreview, OnExport, Both}**
- **PrintOn {FirstPage, LastPage, OddPages, EvenPages, RepeatedBand}**
- **Watermark**
- **Anchor**



Changes in the components architecture

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```
• HyperPage (HyperPage, HyperPage, URL, Author, PageHeader,
  Content)
• HyperPage (HyperPage, HyperPage, URL, Author, PageHeader,
  Content)
• HyperPage (HyperPage, HyperPage, URL, Author, PageHeader,
  Content)
• HyperPage (HyperPage, HyperPage, URL, Author, PageHeader,
  Content)
• HyperPage (HyperPage, HyperPage, URL, Author, PageHeader,
  Content)
• HyperPage (HyperPage, HyperPage, URL, Author, PageHeader,
  Content)
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  Content)
• HyperPage (HyperPage, HyperPage, URL, Author, PageHeader,
  Content)
• HyperPage (HyperPage, HyperPage, URL, Author, PageHeader,
  Content)
```

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Page "contains"

Properties Events

Hyperlink (Hyperlink)

DetailPage Page2

DetailRep

Expression {Dictionary, Name1}

Kind hlDetailPage

ReportVia SortParam

Value

ValuesSer;

MasterData: MasterData1

{Dictionary, "Name"}

"Detailed" page

Band4: 1frxMasterData

Properties Events

Columns 1

ColumnWidth 5,29

DataSet Customers

Description

Filter {mers, "Company">, 1, 1} = SortParam

Font (TFont)

FooterAfter False

Multipage preview

Preview

12.fr3 Page2:A Page2:C Page2:E Page2:D Page2;B



Company	Address	Contact	Phone
Action Club	PO Box 5451-F	Michael Spurling	813-870
Action Diver Supply	Blue Spar Box #3	Marianne Miles	22-44-51
Adventure Undersea	PO Box 744	Gloria Gonzales	011-34-1
American SCUBA Supply	1739 Atlantic Avenue	Lynn Cinciripini	213-654
Aquatic Drama	921 Everglades Way	Gillian Owen	613-442

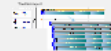
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TreeView report

Properties	
HierarchyOffset	10
IdField	EmpNo
KeepChild	<input type="checkbox"/> False
KeepFooter	<input type="checkbox"/> False
KeepHeader	<input type="checkbox"/> False
KeepTogether	<input type="checkbox"/> False
Left	0
Name	MasterData1
OutlineText	
ParentFont	<input checked="" type="checkbox"/> True
ParentIdField	EmpOwner

MasterData: MasterData1			
AD	Имя Фамилия	Принят	Оклад
AD	[ADOTable1."FirstName"]	[ADOTable1."HireDate"]	[ADOTable1."Salar

PageFooter: PageFooter 1

0	Имя Фамилия	Принят	Оклад
4	Bruce Young	28.12.1988	55500
4	Имя Фамилия	Принят	Оклад
118	Takashi Yamamoto	01.07.1993	32500
4	Имя Фамилия	Принят	Оклад
107	Kevin Cook	01.02.1993	35500
4	Имя Фамилия	Принят	Оклад
105	Oliver H. Bender	08.10.1992	36799
105	Имя Фамилия	Принят	Оклад
113	Mary Page	12.04.1993	48000
4	Имя Фамилия	Принят	Оклад
110	Yuki Ichida	04.02.1993	25689
110	Имя Фамилия	Принят	Оклад
121	Roberto Ferrari	12.07.1993	40500

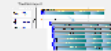
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Improved report inheritance

Parent script

Language: PascalScript

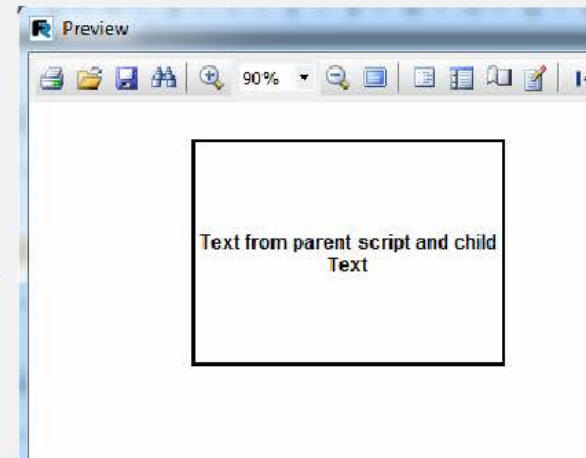
```
procedure Memo1OnBeforePrint(Sender: TfrxComponent);  
begin  
  TfrxMemoView(Sender).Text := 'Text from parent script';  
end;
```



Child script

Language: PascalScript

```
procedure Memo1OnBeforePrint(Sender: TfrxComponent);  
begin  
  inherited Memo1OnBeforePrint(Sender);  
  TfrxMemoView(Sender).Text := TfrxMemoView(Sender).Text + ' and child Text';  
end;  
  
begin  
end.
```





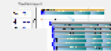
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Changes in the architecture of the engine

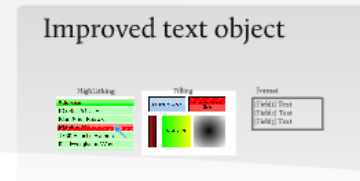
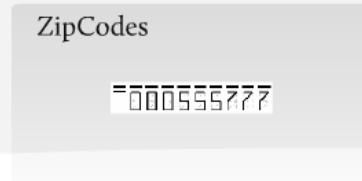
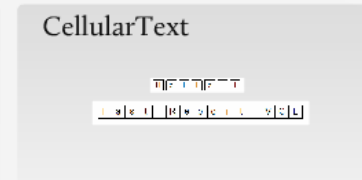
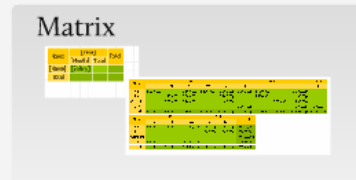
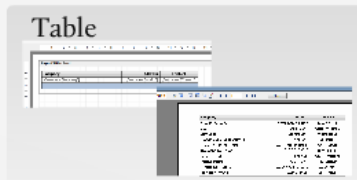
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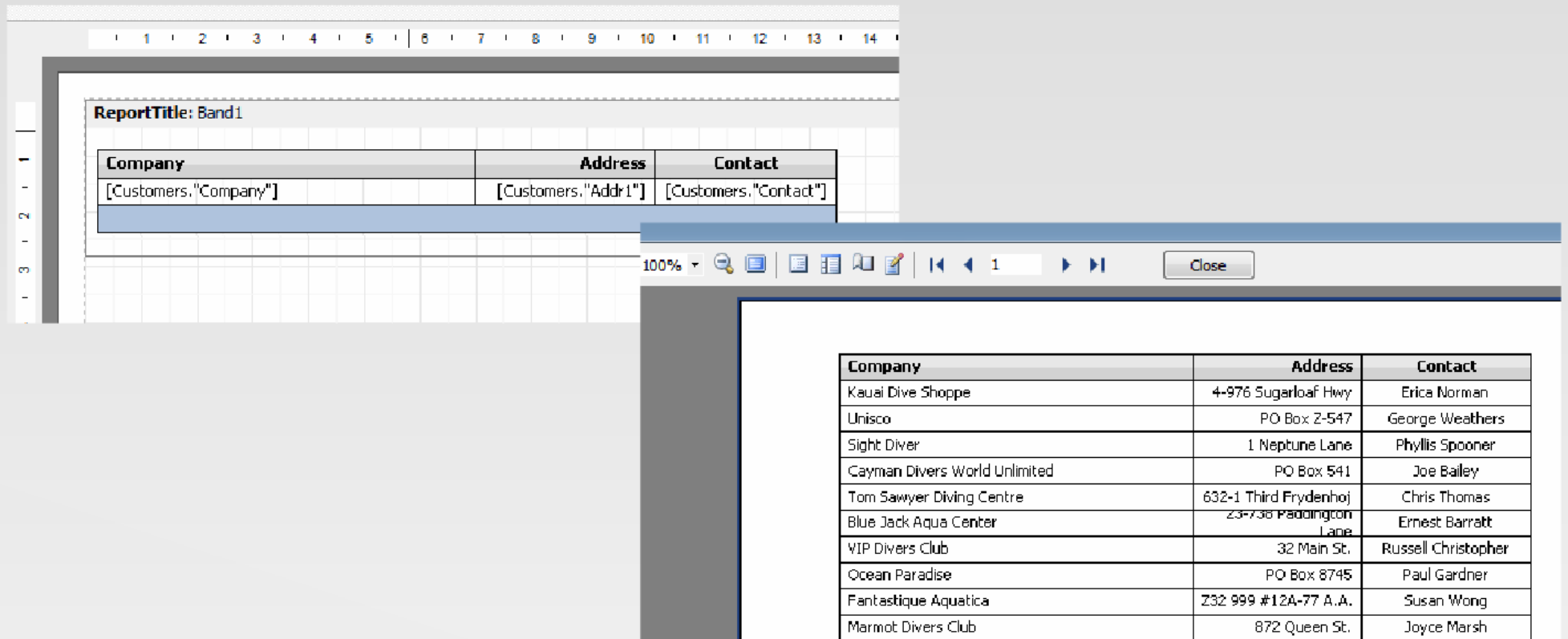
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New objects



Table



ReportTitle: Band1

Company	Address	Contact
[Customers."Company"]	[Customers."Addr1"]	[Customers."Contact"]
Kauai Dive Shoppe	4-976 Sugarloaf Hwy	Erica Norman
Unisco	PO Box 2-547	George Weathers
Sight Diver	1 Neptune Lane	Phyllis Spooner
Cayman Divers World Unlimited	PO Box 541	Joe Bailey
Tom Sawyer Diving Centre	632-1 Third Frydenhoj	Chris Thomas
Blue Jack Aqua Center	23-738 Paddington Lane	Ernest Barratt
VIP Divers Club	32 Main St.	Russell Christopher
Ocean Paradise	PO Box 8745	Paul Gardner
Fantastique Aquatica	232 999 #12A-77 A.A.	Susan Wong
Marmot Divers Club	872 Queen St.	Joyce Marsh

Matrix

Name	[Year]		Total
	[Month]	Total	
[Name]	[Salary]		
Total			

Name	1999					2000				2001
	2	10	11	12	Total	1	2	3	Total	1
Ann	1 000,00p.		1 100,00p.	1 200,00p.	3 300,00p.	1 300,00p.	1 400,00p.		2 700,00p.	
Ben		1 900,00p.	2 000,00p.		3 900,00p.		2 100,00p.		2 100,00p.	
Catherine		3 000,00p.	3 100,00p.		6 100,00p.			3 200,00p.	3 200,00p.	
Den						3 999,00p.			3 999,00p.	4 000,00p.
Total	1 000,00p.	4 900,00p.	6 200,00p.	1 200,00p.	13 300,00p.	5 299,00p.	3 500,00p.	3 200,00p.	11 999,00p.	4 000,00p.
Name	2001			2002		Total				
	2	3	Total	1	Total					
Ann	1 500,00p.	1 600,00p.	3 100,00p.	1 700,00p.	1 700,00p.	10 800,00p.				
Ben				1 800,00p.	1 800,00p.	7 800,00p.				
Catherine						9 300,00p.				
Den	4 100,00p.		8 100,00p.			12 099,00p.				
Total	5 600,00p.	1 600,00p.	11 200,00p.	3 500,00p.	3 500,00p.	39 999,00p.				

BarCodes

CellularText

H	e	l	l	o		!
---	---	---	---	---	--	---

F	a	s	t		R	e	p	o	r	t		V	C	L
---	---	---	---	--	---	---	---	---	---	---	--	---	---	---

BarCodes

Code 128 Autoencode



PDF 417



Datamatrix



QR Code



ZipCodes

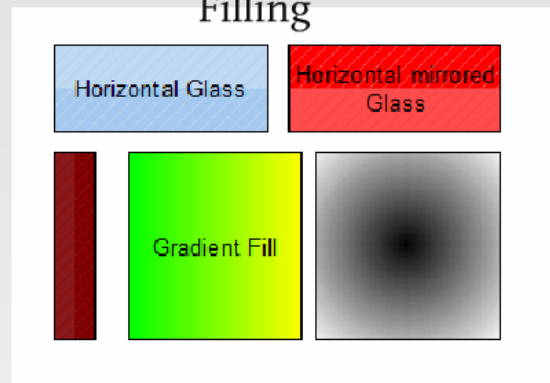
000555777

Improved text object

HighLithing

Address
PO Box 5451-F
Blue Spar Box #3
PO Box 744
1739 Atlantic Avenue
921 Everglades Way

Filling



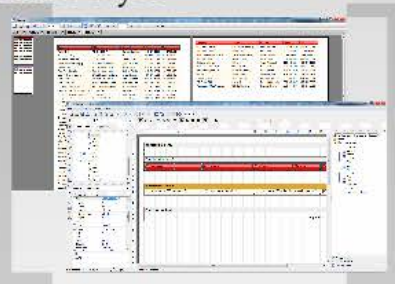
Format

[Field1] Text
[Field2] Text
[Field3] Text

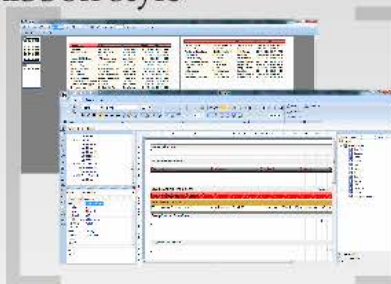
Interface changes

Different styles of report designer and preview

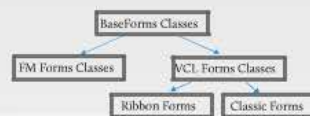
Classic style



Ribbon style



Cross platform



Classic style

The screenshot displays a software interface for previewing and designing reports. The top window, titled "Preview", shows a data table with columns: Company, Address, Contact, Phone, and Fax. Below this, a "FastReport - 12.frb" window is open, showing the report design view. The design view includes a "ReportTitle: Band1", a "PageHeader: Band2" with a table of company data, a "MasterData: Band4" with a table of customer data, and a "PageFooter: Band3". The design view also includes a "Properties" panel on the left and a "Data" panel on the right.

Company	Address	Contact	Phone	Fax
Nelson Uno	PO Box 1101	Monica Sping	818 870 0289	818 870 0282
Anten River Supply	Rise Spar Box #5	Marianne Miles	77-44-500711	77-44-500706
Adventure Undersea	PO Box 744	Clara Gonzales	011-34-00054	011-34-00084
Amecan SCUBA Supply	1739 Avenida Avenue	Lynn Cincibini	213 851 0082	213 851 0085
Aquatic Treasures	801 Fungus Way	Billie Davis	615-440-7054	615-440-7078
Blue Class I Apnease	6345 W. Chone Lane	Christine Taylor	213-555-1004	213-555-1005
Blue Jock Aqua Center	23 / 34 Haddington Lane	Immaculata	491 838 / 8226	491 838 8706
Blue Sports Club	203 10th Ave. Box 744	Theresa Weber	610-772-8704	610-772-8886
Calamander Underwater	Box 289 Hiccupps Hunt	Nicole Upcott	612-327-0342	612-327-0343
Calamander Underwater	PO Box 541	Joe Bailey	213 223 0941	213 223 0921
Central Underwater Supplies	PO Box 737	Marie Evershall	011-5-597044	011-5-597044
Uarry Jones Looker	240 South 10th Place	Angie Wagner	27-11-445240	27-11-445229
			809-829-2112	809-829-2556

Company	Address	Contact	Phone	Fax
The North Chicago	15745 Indiana Way	Rene Williams	800-777-8788	800-777-8788
The Diving Company	PO Box 0535	Diana Miles	22-44-50008	22-44-50070
Tom Sawyer Diving Center	622 1 Third Hydroline	Chris Thomas	804 796 2022	804 796 7772
Tora Tora Tora	PO Box H-4771	Karen Rider	808-898-2043	808-898-8884
Underwater Fantasy	PO Box 842	Orin Alonzo	809-335-2214	809-335-2234
Underwater SCUBA Company	PO Box 51 91	Mikael Grosman	809 558 1228	809 558 2776
Underwater Sports Co	351-A Sansara St.	Dave Walling	408-887-0094	408-887-0094
Vision	PO Box 7-547	Bernie Venable	808-777-8815	808-777-8815
Vision Ventures	773 Keyhole Court	Susan Smith	632 096 0723	632 096 0854
VIP Divers Club	37 Main St.	Russell Christopher	808-453-5876	808-453-5877
Waterscout SCUBA Center	7065 NE Delber Ct.	Richard Houser	503-854-2434	503-854-2008

ReportTitle: Band1

PageHeader: Band2

Company	Address	Contact	Phone	Fax

MasterData: Band4

{Customers "Company"}	{Customers "Address"}	{Customers "Contact"}	{Customers "Phone"}	{Customers "Fax"}

PageFooter: Band3

Page {Page#}

Properties: (1 items)

- Blend: 0.5
- Color: Black
- Font: Arial
- Orientation: Horizontal
- Page: 1 of 1
- FlowTo: (None)
- FlowFrom: (Transverse)
- GapX: 2
- GapY: 1
- HAign: left
- Height: 100
- HideZeros: False
- Fill: (None)
- DropHil: (None)

Centimeters: 0, 10, 0, 10; 5, 20, 0, 50

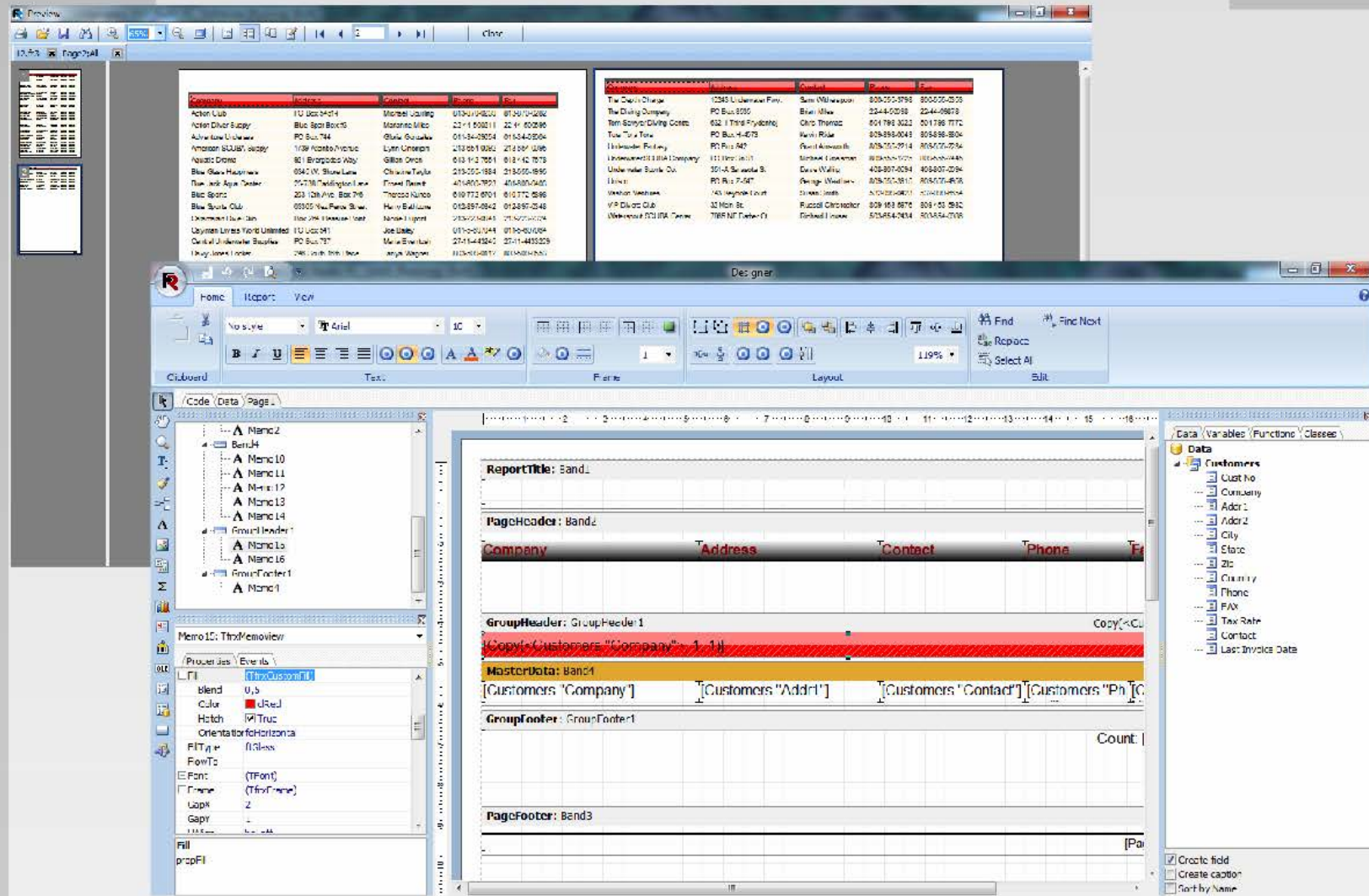
Memor4: Company

Data: Variables, Functions, Classes

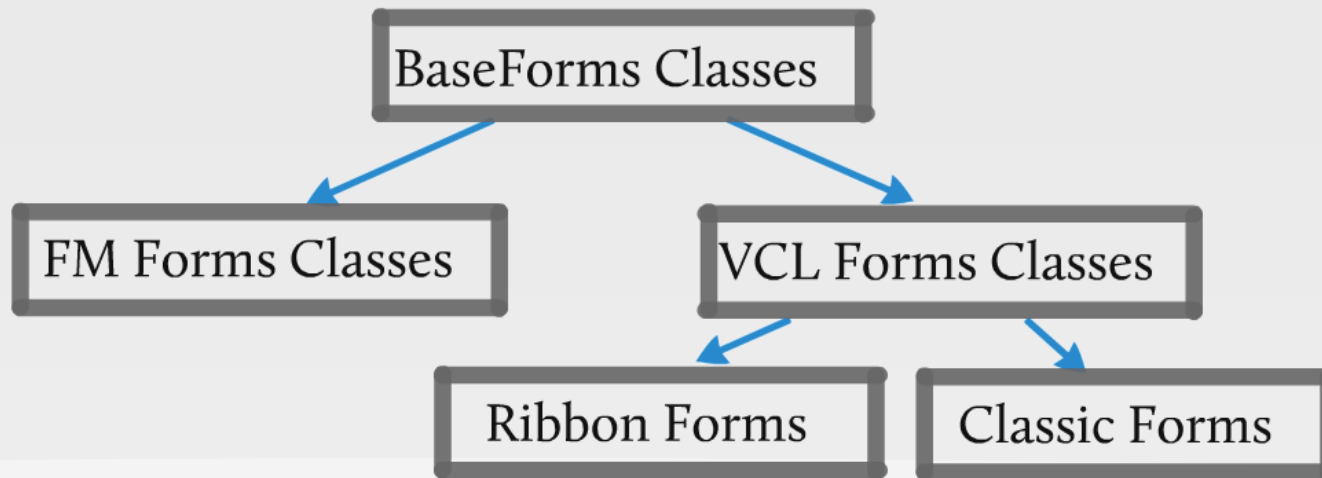
- Customers
 - Company
 - Address
 - Contact
 - Phone
 - Fax
 - Tax Rate
 - Contact
 - Last Invoice Date

Create field
Create function
Sort by Name

Ribbon style



Cross platform



Fast Report 5 VCL

New export filters and import
convertors



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New export filters

- XLSX, PPTX, DOCX
- XLS BIFF8
- HTML <div>
- PDF/A

XLSX, PPTX, DOCX
• Office Open XML formats • XLSX (Microsoft Excel 2007) • PPTX (Microsoft PowerPoint 2007) • DOCX (Microsoft Word 2007)
BIFF8 - for what?
• XLS (Microsoft Excel 97-2003) • XLSX (Microsoft Excel 2007) • PPTX (Microsoft PowerPoint 2007)
HTML <div>
• Export HTML (as HTML) • Export HTML (as PDF) • Export HTML (as XPS) • Export HTML (as EPUB) • Export HTML (as EPUB 3.0)
PDF/A
• Export PDF/A • Export PDF/A (as PDF/A-1a) • Export PDF/A (as PDF/A-1b)

XLSX, PPTX, DOCX

- OfficeOpen XML formats
- XLSX file often less than BIFF8
- XLSX - table format
- PPTX,DOCX - layer format
- All supports pictures

BIFF8 - for what?

- You do not need setted up Excel
- Crypting
- Faster than XLS via OLE
- Pictures

HTML <div>

- Layer HTML (WYSIWYG)
- No limitations of table export
- Faster than table HTML export
- Supports EMF, PNG, BMP, JPEG
- HTML5+CSS3
- One file (with internal pictures)

PDF/A

- Standard PDF/A-1a
- PDF/A - extension of PDF from the FastReport 4
- CrossPlatform format

Caching

- Is necessary for huge reports
- UseFileCache:=True
- Limits size of used memory

Convertors to FastReport VCL

- Quick Reports
- Report Builder
- + Rave Reports
- + Crystal Reports

Fast Cube 2 VCL

what is news?

New style

Cross table



Popup list boxes



Dimensions and measures captions



Style and Highlight for Measures and Dimensions



Style and Highlight editor



Cross table

The analysis of sales by managers

Product

Field list

Manager Customer Amount Cost Paid Balance

Alex Nahodchiv Balica Ltd
Kuril Ltd
Nahodka Ltd
Alex Nahodchiv

Diana Pribalt Balica Ltd
Belomorie Ltd
Kuril Ltd
Nahodka Ltd
Diana Pribalt

Egor Svetlov Balica Ltd
Belomorie Ltd
Kuril Ltd
Nahodka Ltd
Egor Svetlov

Service

Version 1

The analysis of sales by managers

Product

Measures

Manager Customer Amount Cost Paid Balance

Grand total 601 230,00 11 706 187,56 5 219 178,52 6 487 039,04

Alex Nahodchiv Balica Ltd 110,00 4 021,50 4 021,50 0,00
Kuril Ltd 393,00 15 869,60 4 332,70 11 536,90
Nahodka Ltd 4 446,00 227 428,55 0,00 227 428,55
Total 4 951,00 247 319,65 8 354,20 238 965,45

Diana Pribalt Balica Ltd 187,00 79 738,70 76 469,10 3 259,60
Belomorie Ltd 43,00 6 881,20 0,00 6 881,20
Kuril Ltd 18 542,00 1 206 952,97 460 079,88 746 913,09
Nahodka Ltd 1 856,00 128 362,20 0,00 128 362,20
Total 20 628,00 1 421 975,07 536 548,98 885 426,09

Egor Svetlov Balica Ltd 281 177,00 3 273 996,19 2 964,98 3 271 031,21
Belomorie Ltd 3,00 2 780,00 0,00 2 780,00
Chernomorie Ltd 35 630,00 62 584,86 20 078,00 42 506,86
Kuril Ltd 4 844,00 56 952,95 23 342,15 33 610,80
Nahodka Ltd 15,00 1 470,10 0,00 1 470,10
Ural Ltd 1 306,00 24 746,50 24 746,50 0,00
Total 322 977,00 3 422 430,60 71 131,63 3 351 298,97

Evgenia Besprinopnaya Balica Ltd 59 815,00 218 004,08 17 028,60 200 975,49
Kuril Ltd 121,00 952,00 0,00 952,00
Total 59 936,00 218 956,08 17 028,60 201 924,49

Evgeniya Belozhenova Kuril Ltd 100,00 135,00 0,00 135,00
Nahodka Ltd 6 857,00 530,16 0,00 530,16

Average: 4021,5 Count: 1 Sum: 4021,5

Version 2

Popup list boxes

☐ Alex Nahodchiv
☐ Diana Pribalt
☐ Egor Svetlov
☐ Evgenia Besprinzipnaya
☐ Evgeniya Belozemova
☐ Larisa Prostaya
☐ Olga Sbezavsi
☐ Semen Bogatir
☐ Ulia Finskaya
☐ Vasilisa Ruseva
☐ Viktoria Pobednaya

☒ ☐ ☐ ☒

☒ Alex Nahodchiv
☒ Diana Pribalt
☒ Egor Svetlov
☒ Evgenia Besprinzipnaya
☒ Evgeniya Belozemova
☒ Larisa Prostaya
☒ Olga Sbezavsi
☒ Semen Bogatir
☒ Ulia Finskaya
☒ Vasilisa Ruseva
☒ Viktoria Pobednaya

☒ ☐ ☐ ☒

Dimensions and measures captions

Product			
		Measures	
Manager	Customer	Amount	Cost

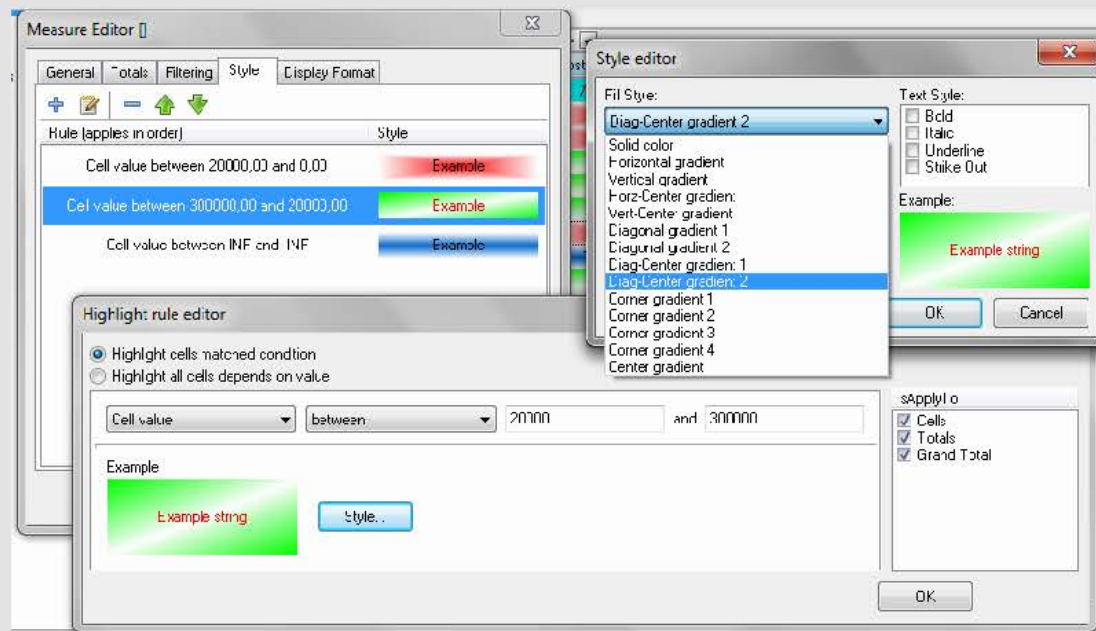
Product			
		Measures	
Manager	Customer	Amount	Cost

Product			
		Measures	
Manager	Customer	Amount	Cost

Style and Highlight for Measures and Dimensions

Amount	Cost	Paid
601 230,00	11 706 187,56	5 219 178,52
110,00	4 021,50	4 021,50
393,00	15 869,60	4 332,70
4 448,00	227 428,55	0,00
4 951,00	247 319,65	8 354,20
187,00	79 738,70	76 469,10
43,00	6 881,20	0,00
18 542,00	1 206 992,97	460 079,88
1 856,00	128 362,20	0,00
20 628,00	1 421 975,07	536 548,98
281 177,00	3 273 986,16	2 964,98
3,00	2 780,00	0,00
35 630,00	62 584,86	20 078,00
4 844,00	56 852,95	23 342,15
15,00	1 470,10	0,00
1 308,00	24 746,50	24 746,50
322 977,00	3 422 430,61	71 131,63
59 815,00	718 004,09	17 028,60
121,00	6 333,60	4 381,60
59 936,00	724 337,69	21 410,20
100,00	3 697,20	1 592,20

Style and Highlight editor



Events for Draw management

Full replacement of the systems
Draw procedure

- OnDrawCell
- OnDrawAxisCell
- OnMeasureAxisCell

Change text

- OnGetCellText
- OnGetAxisCellText

Change style

- OnGetCellStyle
- OnGetAxisCellStyle

Choose image

- OnGetCellImageIndex
- OnGetAxisCellImageIndex

Full replacement of the systems Draw procedure

- OnDrawCell
- OnDrawAxisCell
- OnMeasureAxisCell

Change text

- OnGetCellText
- OnGetAxisCellText

Change style

- OnGetCellStyle
- OnGetAxisCellStyle

Choose image

- OnGetCellImageIndex
- OnGetAxisCellImageIndex

Filtering, Grouping and Totals

New filter type: Single

Used when need to make filter on single value.
Any field can be Standard or Single filter type.



Grouping of values

Values can be grouped.
Can be created group "Other"



Grouping values

Group can be collapsed in axis

Filter of values in the group



Values' grouping

Group and dimensions are collapsed

Group and dimensions are expanded

Group is expanded, dimensions is collapsed

Group is collapsed, dimensions is expanded

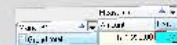


Totals

Totals can be:

- in the begin
- in the end
- hidden

Grand total can be collapsed




You can collapse grand total for any measure separately



New filter type: Single

Used when need to make filter on single value.

Any field can be Standard or Single filter type.



A screenshot of a software filter dialog box. The title bar is light blue and contains the text 'SEX' in a bold, sans-serif font. To the right of the title bar are two small icons: a blue triangle pointing up and a blue square with a black downward-pointing arrow. The main area of the dialog is white and contains two radio button options: 'Female' and 'Male'. The 'Female' option is selected, indicated by a blue dot in the center of its radio button. Below these options is a light gray rectangular area. In the bottom right corner of this area is a small blue square icon containing a white checkmark. The entire dialog box has a thin black border.

Grouping of values

Values can be grouped.

Can be created group “Other”

Manager
<input type="checkbox"/> Grand total
Alex Nahodchiv
Diana Pribalt
Egor Svetlov
Evgenia Besprinzipnaya
Evgeniya Belozemova
Larisa Prostaya
Olga Sbezavsi
Semen Bogatir
Ulia Finskaya
Vasilisa Ruseva
Viktoria Pobednaya

Manager
<input type="checkbox"/> Grand total
<input checked="" type="checkbox"/> Department 1
Alex Nahodchiv
Vasilisa Ruseva
Total
<input checked="" type="checkbox"/> Department 2
Diana Pribalt
Evgenia Besprinzipnaya
Viktoria Pobednaya
Total
<input checked="" type="checkbox"/> Other
Egor Svetlov
Evgeniya Belozemova
Larisa Prostaya
Olga Sbezavsi
Semen Bogatir
Ulia Finskaya
Total

Manager
<input type="checkbox"/> Grand total
<input checked="" type="checkbox"/> Department 1
Alex Nahodchiv
Vasilisa Ruseva
Total
<input checked="" type="checkbox"/> Department 2
Diana Pribalt
Evgenia Besprinzipnaya
Viktoria Pobednaya
Total
Egor Svetlov
Evgeniya Belozemova
Larisa Prostaya
Olga Sbezavsi
Semen Bogatir
Ulia Finskaya

Grouping values

Group can be collapsed in axis

Manager	
<input type="checkbox"/> Grand total	
<input checked="" type="checkbox"/> Department 1	
<input checked="" type="checkbox"/> Department 2	Diana Pribalt
	Evgenia Besprinzipnaya
	Viktoria Pobednaya
	Total
<input checked="" type="checkbox"/> Other	

Filter of values in the group

<input checked="" type="checkbox"/>	Department 1	<input type="checkbox"/>
	Alex Nahodchiv	<input type="checkbox"/>
	<input checked="" type="checkbox"/> Vasilisa Ruseva	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Department 2	<input type="checkbox"/>
	Diana Pribalt	<input type="checkbox"/>
	Evgenia Besprinzipnaya	<input type="checkbox"/>
	Viktoria Pobednaya	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>
	<input checked="" type="checkbox"/> Egor Svetlov	<input type="checkbox"/>
	<input checked="" type="checkbox"/> Evgeniya Belozemova	<input type="checkbox"/>
	<input checked="" type="checkbox"/> Larisa Prostaya	<input type="checkbox"/>
	<input checked="" type="checkbox"/> Olga Sbezavsi	<input type="checkbox"/>
	<input checked="" type="checkbox"/> Semen Bogatir	<input type="checkbox"/>

Values' grouping

Group and dimension are collapsed



Group and dimension are expanded



Group is expanded, dimension is collapsed



Group is collapsed, dimension is expanded




Manager		Customer
Grand total		
Department 1		
Department 2	Diana Pribalt	Baltica Ltd
		Belomorie Ltd
		Kurili Ltd
		Nahodka Ltd
		Total
	Evgenia Besprinzipnaya	Baltica Ltd
		Kurili Ltd
		Total
	Viktorie Pobednaya	
	Total	
Other		Baltica Ltd
		Belomorie Ltd
		Chernomorie Ltd
		Kurili Ltd
		Nahodka Ltd
		Ural Ltd
		Zapolarie Ltd
		Total

Totals

Totals can be:

- in the begin
- in the end
- hidden

Grand total can be collapsed

	Measures 	
Manager 	Amount	Cost
 Grand total	601 230,00	 11,1

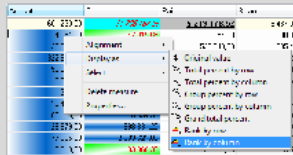
You can collapse grand total for any measure separately

Manager		Measures	
Amount			601 230,00
Cost			11 726 187,52
Paid			5 219 178,52
Balance			6 487 009,04
Department 1	Amount		82 036,00
	Cost		2 540 941,53
	Paid		1 912 220,44
	Balance		628 721,09
Department 2	Amount		83 477,00
	Cost		2 329 673,06
	Paid		611 771,18
	Balance		1 717 901,88
Other	Amount		435 717,00
	Cost		6 835 572,81
	Paid		2 635 186,90
	Balance		4 140 386,07

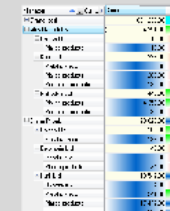
Manager		Measures	
Amount			601 230,00
Cost			11 726 187,52
Paid			5 219 178,52
Balance			6 487 009,04
Department 1	Amount		82 036,00
	Balance		628 721,09
Department 2	Amount		83 477,00
	Balance		1 717 901,88
Other	Amount		435 717,00
	Balance		4 140 386,07

And some more additions and improvements

Rank by row or column



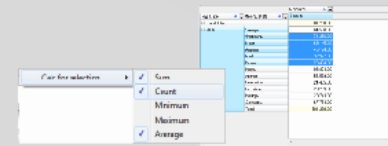
New axis type - Tree



Hide any row or column



Status bar with the ability to calculate the aggregate function for selected area



Rank by row or column

Amount	Cost	Paid	Balance
601 230,00	11 706 187,52	5 219 178,52	6 487 00
4 951,00	247 319,65	8 354,20	238 96
20 6		536 548,98	885 42
322 9			
59 9			
6 9			
3			
10 4			
68 100,00	1 016 034,33		
26 879,00	998 331,20		
77 085,00	2 293 621,88		
2 913,00	183 360,30		

Alignment

Display as

Select

Delete measure

Properties...

\$ Original value

% Total percent by row

% Total percent by column

% Group percent by row

% Group percent by column

% Grand total percent

Rank by row

Rank by column

New axis type - Tree

Manager	Amount	Cost
Grand total	601 230,00	
Alex Nahodchiv	4 951,00	
Baltica Ltd	110,00	
Plastic products	110,00	
Kurili Ltd	393,00	
Metal utensils	3,00	
Plastic products	260,00	
Porcelain products	130,00	
Nahodka Ltd	4 448,00	
Plastic products	4 358,00	
Porcelain products	90,00	
Diana Pribalt	20 628,00	
Baltica Ltd	187,00	
Metal utensils	187,00	
Belomorie Ltd	43,00	
Metal utensils	9,00	
Plastic products	34,00	
Kurili Ltd	18 542,00	
Glasswares	4,00	
Metal utensils	541,00	
Plastic products	17 412,00	
Silver utensils	505,00	

Hide any row or column

Manager	Customer	Amount	Cost
Grand total		601 230,00	7,00
Alex Nahodchiv	Baltica Ltd	110,00	1,00
	Kurili Ltd	393,00	1,00
	Nahodka Ltd	4 440,00	1,00
	Total		
Diana Pribalt	Baltica Ltd		
	Belomorie Ltd		
	Kurili Ltd		
	Nahodka Ltd		
	Total		
Egor Svetlov	Baltica Ltd		
	Belomorie Ltd		
	Chernomorie Ltd		
	Kurili Ltd		
	Nahodka Ltd		
	Ural Ltd		
	Total	222 877,00	1,00

Move to group

Filter out this item

Filter out all other items

Hide node

Show hidden nodes

Grand total

Axis type

Show Top N...

Properties...

Manager	Customer	Amount	Cost
Grand total		601 230,00	7,00
Alex Nahodchiv	Baltica Ltd	110,00	1,00
	Kurili Ltd	393,00	1,00
	Total	4 951,00	1,00
Diana Pribalt	Baltica Ltd	187,00	1,00
	Belomorie Ltd	43,00	1,00
	Kurili Ltd	18 542,00	1,00
	Nahodka Ltd	1 856,00	1,00
	Total	20 628,00	1,00
Egor Svetlov	Baltica Ltd	281 177,00	1,00
	Belomorie Ltd	3,00	1,00
	Chernomorie Ltd	35 630,00	1,00
	Kurili Ltd	4 844,00	1,00
	Nahodka Ltd	15,00	1,00
	Ural Ltd	1 308,00	1,00
	Total	222 877,00	1,00

Status bar with the ability to calculate the aggregate function for selected area

The image shows a screenshot of a data application. On the left, a menu titled "Calc for selection" is open, displaying a list of aggregate functions: Sum, Count, Minimum, Maximum, and Average. Each function has a checkbox to its left, and the "Count" checkbox is currently checked. In the background, a data table is visible with columns for "Год_Date" (Year), "Месяц_Date" (Month), and "Amount". The table shows data for the year 2006, with months from January to December, and a "Total" row. The "Amount" column contains numerical values. At the bottom of the application window, a status bar displays the results of the selected aggregate function: "Average: 52101", "Count: 6", and "Sum: 312606".

Год_Date	Месяц_Date	Amount
Grand total		601 230,00
2006	Январь	64 560,00
	Февраль	74 296,00
	Март	69 145,00
	Апрель	45 174,00
	Май	32 977,00
	Июнь	26 454,00
	Июль	98 804,00
	Август	56 579,00
	Сентябрь	24 495,00
	Октябрь	20 209,00
	Ноябрь	20 743,00
	Декабрь	67 794,00
	Total	601 230,00

Calc for selection

- ☒ Sum
- ☒ Count
- ☐ Minimum
- ☐ Maximum
- ☒ Average

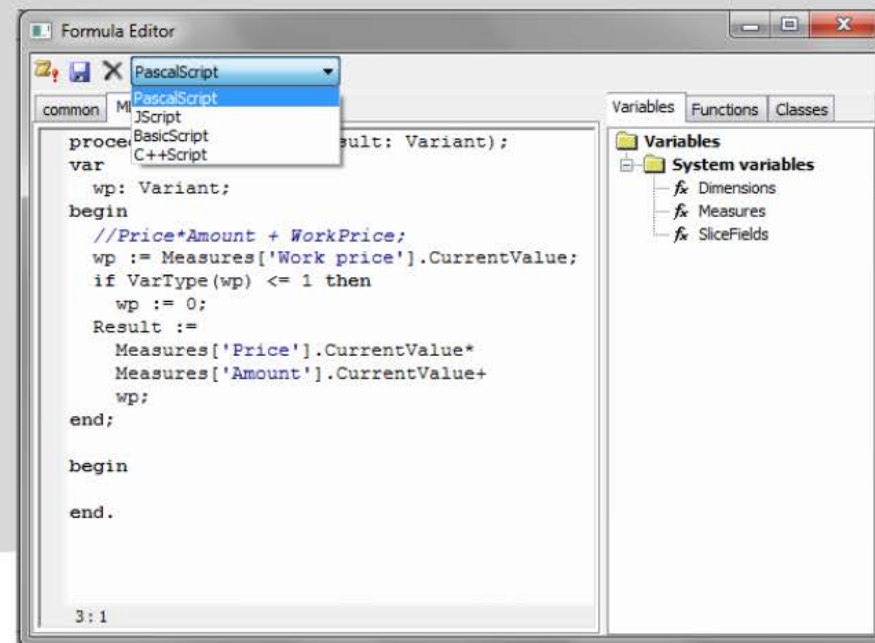
Average: 52101 Count: 6 Sum: 312606

Using FastScript in the FastCube 2

Common script

Use script for:

- calculation measures
- calculation fields
- formatting
- highlighting
- filtration



Data source

- Loading data from primary sources and additional (reference)
- Components for load data:
 - TfcxDBDataSet
 - TfcxUserDataSet
- Component, which describes the fields and the structure of the data source :
 - TfcxDataSource

TfcxDataSource

Set primary source

Describe fields:

- Target type of the field to convert data
- Set references
- Set field for order key
- Set field for caption value
- Split data and time
- Calculation fields
- Parameters

TfcxDataSource

Set primary source

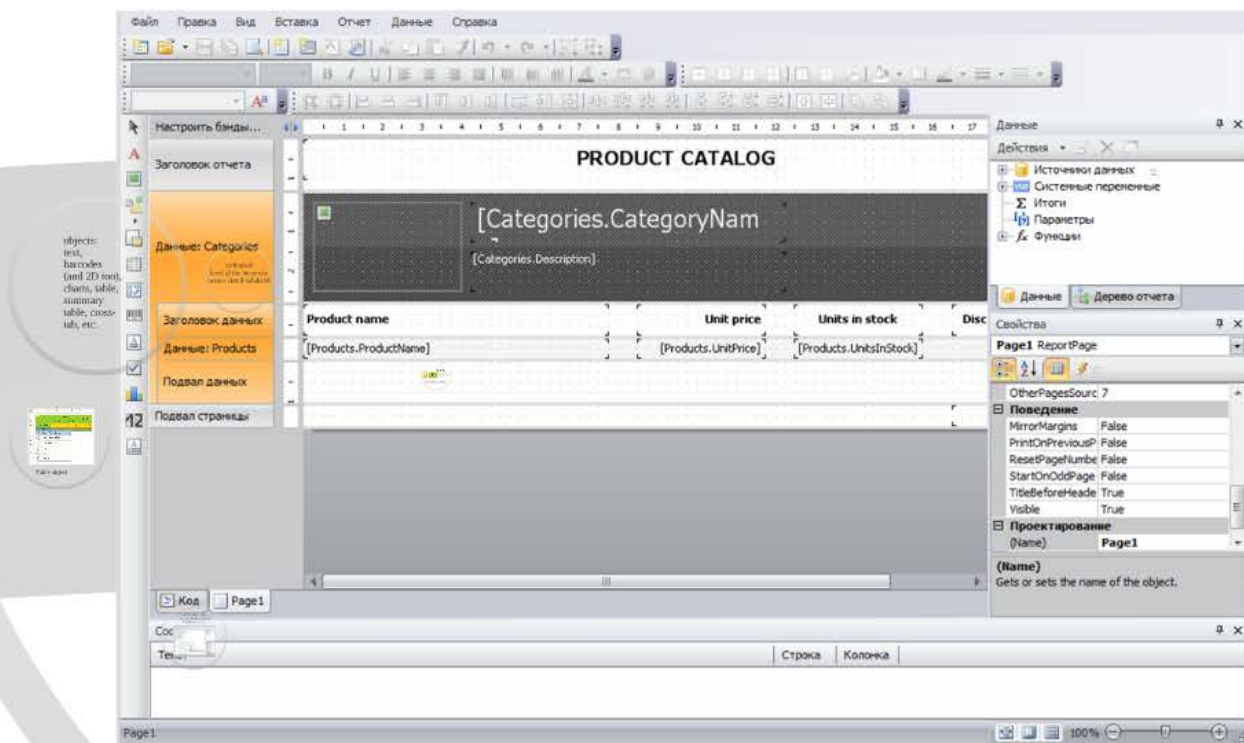
Describe fields:

- Target type of the field to convert data
- Set references
- Set field for order key
- Set field for caption value
- Split data and time
- Calculation fields
- Parameters

Fast Report.Net

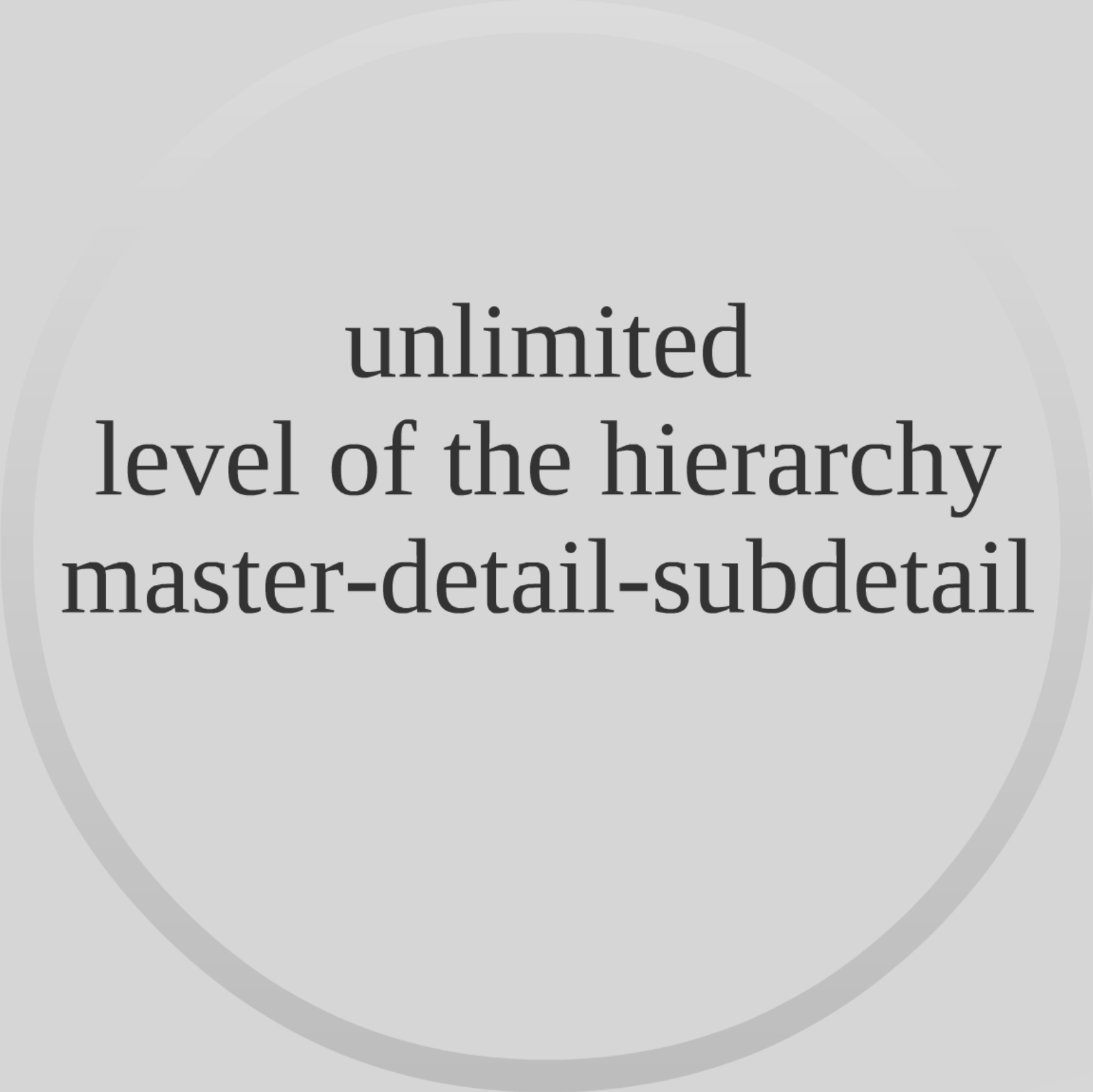
Cross-platform possibilities

Report designer





application
data and
internal
datasources



unlimited
level of the hierarchy
master-detail-subdetail

Report Title		PRODUCTS BY SUPPLIERS	
		[Suppliers.CompanyName]	
	1	Country	[Suppliers.Country]
	2	Address	[Suppliers.Address]
	3	City	[Suppliers.City]
	4	Region	[Suppliers.Region]
	5	Phone	[Suppliers.Phone]
	6	Fax	[Suppliers.Fax]
	7	Contact name	[Suppliers.ContactName]
	8	Contact title	[Suppliers.ContactTitle]
		Subreport1	
Data: Suppliers			
Page Footer			

inherited reports and subreports

objects:
text,
barcodes
(and 2D too),
charts, table,
summary
table, cross-
tab, etc.

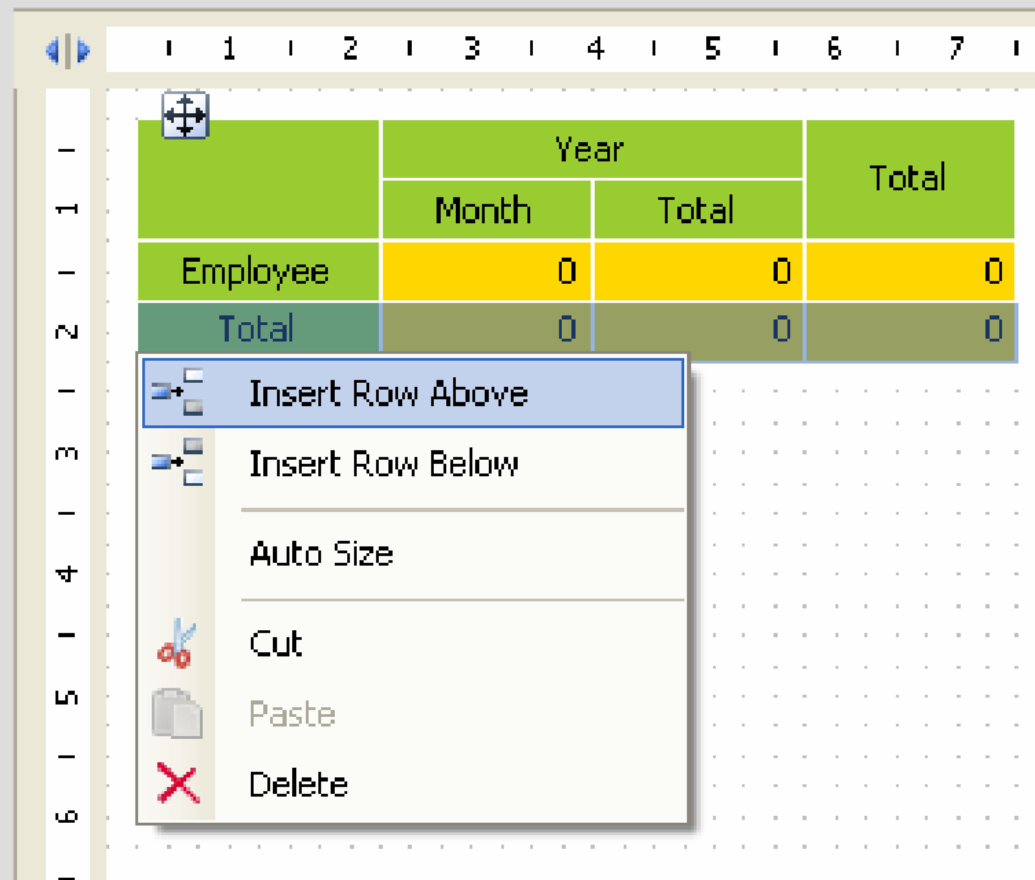


Данные: Са

lev
ma

Заголовок

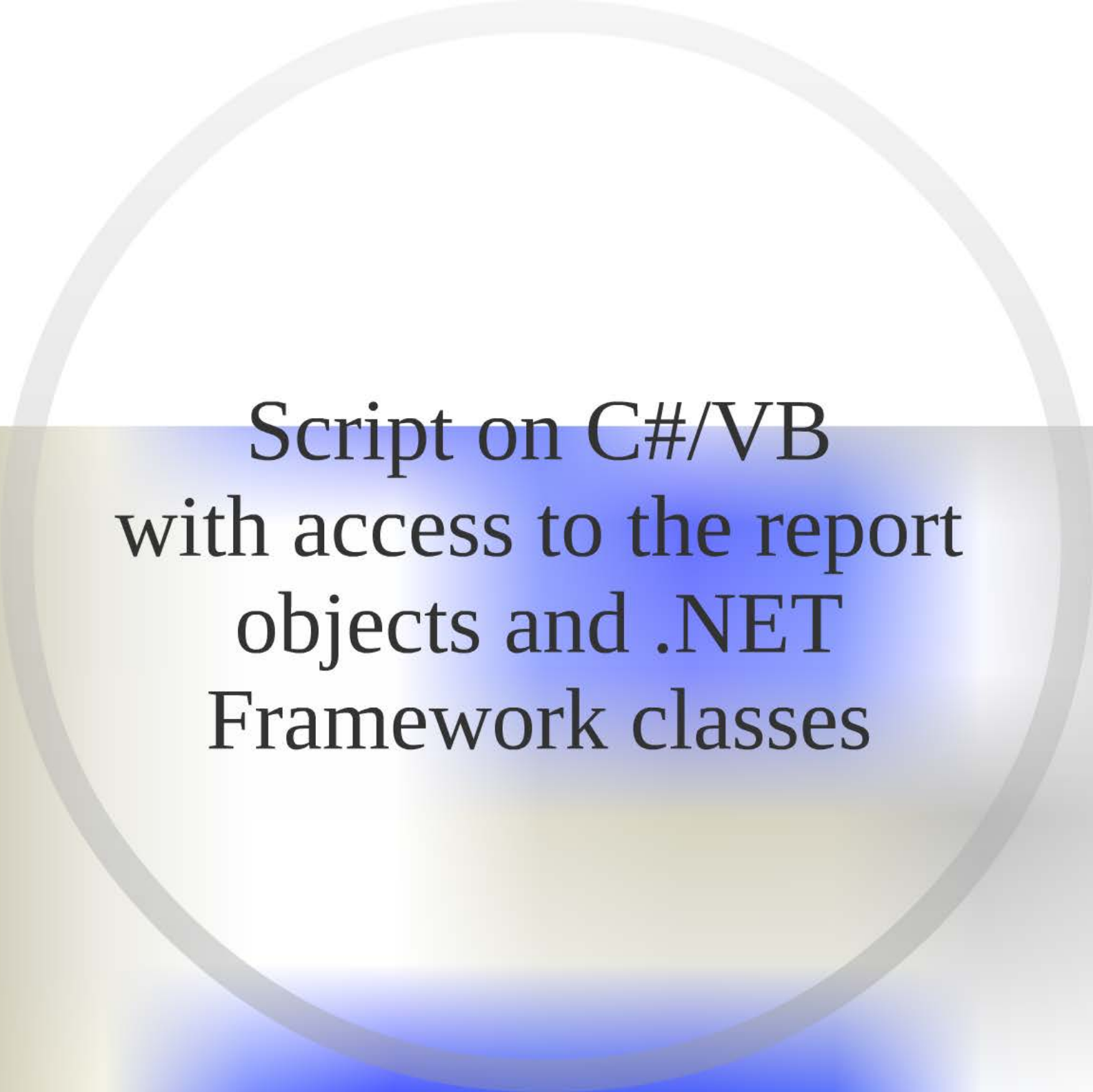
Данные: Р



The screenshot shows a spreadsheet application window. At the top, there is a horizontal tab bar with tabs labeled 1 through 7. On the left side, there is a vertical row bar with rows labeled 1 through 6. A table is displayed in the center of the spreadsheet. The table has four columns: an empty column, a 'Year' column, a 'Total' column, and another 'Total' column. The 'Year' column is further divided into 'Month' and 'Total' sub-columns. The first row of the table is green. The second row is yellow and contains the text 'Employee' in the first column, and the number '0' in the 'Month', 'Total', and 'Total' columns. The third row is blue and contains the text 'Total' in the first column, and the number '0' in the 'Month', 'Total', and 'Total' columns. A context menu is open over the 'Total' row, showing options: 'Insert Row Above', 'Insert Row Below', 'Auto Size', 'Cut', 'Paste', and 'Delete'. The 'Insert Row Above' option is highlighted.

	Year	Total	Total
	Month	Total	Total
Employee	0	0	0
Total	0	0	0

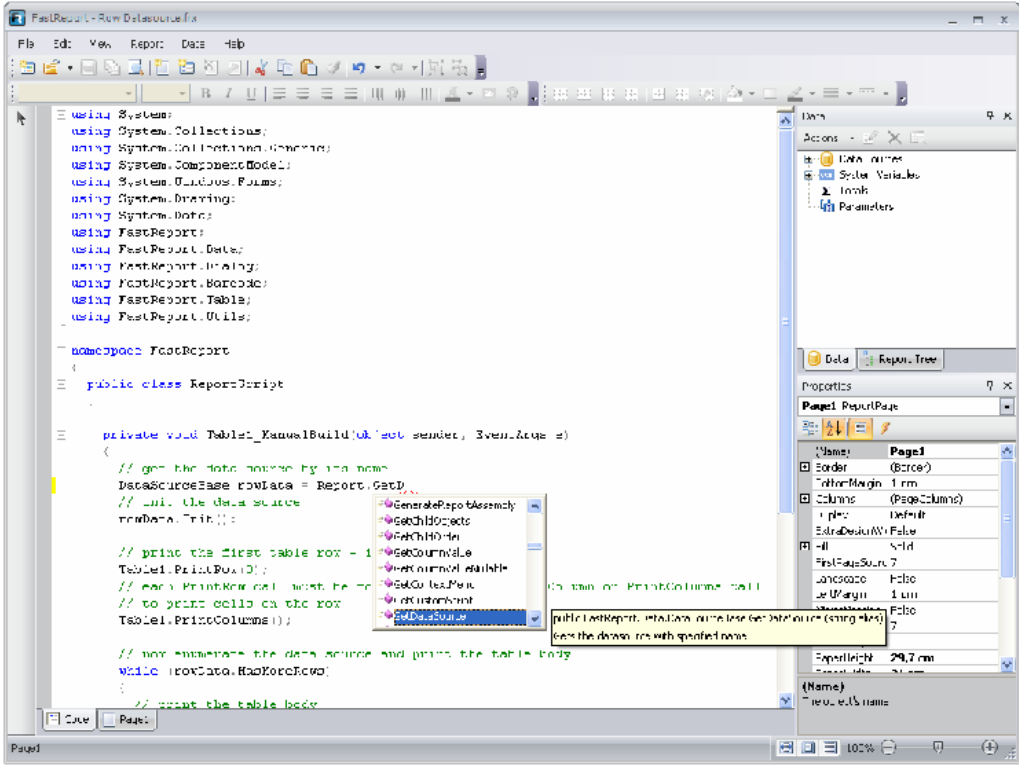
Table object



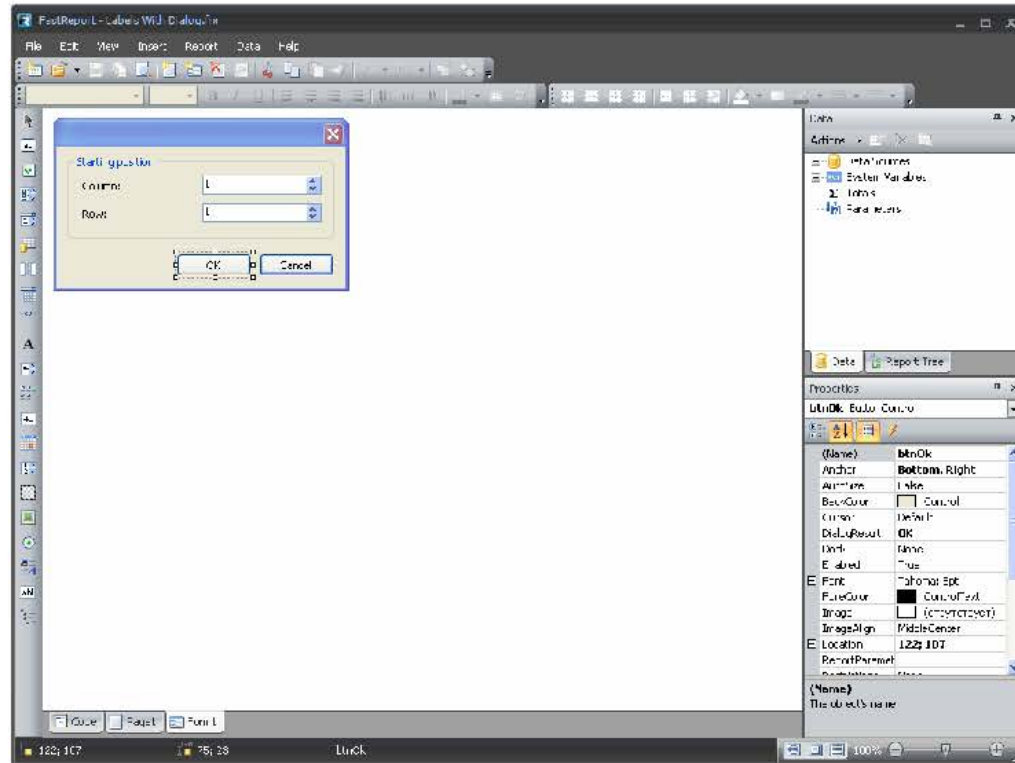
Script on C#/VB
with access to the report
objects and .NET
Framework classes

Script editor with syntax highlighting and IntelliSense support

The screenshot displays the 'FastReport - Row DataSource Editor' application window. The main area contains a C# script with syntax highlighting. A tooltip is visible over the 'GetDataSource' method call, listing available methods like 'GenerateReportAssembly', 'GetChildObjects', etc. On the right, there are panels for 'Data' (showing Data sources, Style Variables, Links, Parameters), 'Properties' (for Page1 ReportPage), and 'Export' (with options like Export to PDF, XPS, etc.). The status bar at the bottom indicates 'Page1' and '100%' zoom.



report objects
event
handlers



internal report dialogue forms

"Smart" objects
autosize, autoposition



Dialog data filtration without coding!

Business-logic

```
public class Category
{
    private string FName;
    private List<Product> FProducts;

    public string Name
    {
        get { return FName; }
    }

    public List<Product> Products
    {
        get { return FProducts; }
    }

    public Category(string name)
    {
        FName = name;
        FProducts = new List<Product>();
    }
}
```

```
public class Product
{
    private string FName;

    public string Name
    {
        get { return FName; }
    }

    public Product(string name)
    {
        FName = name;
    }
}
```

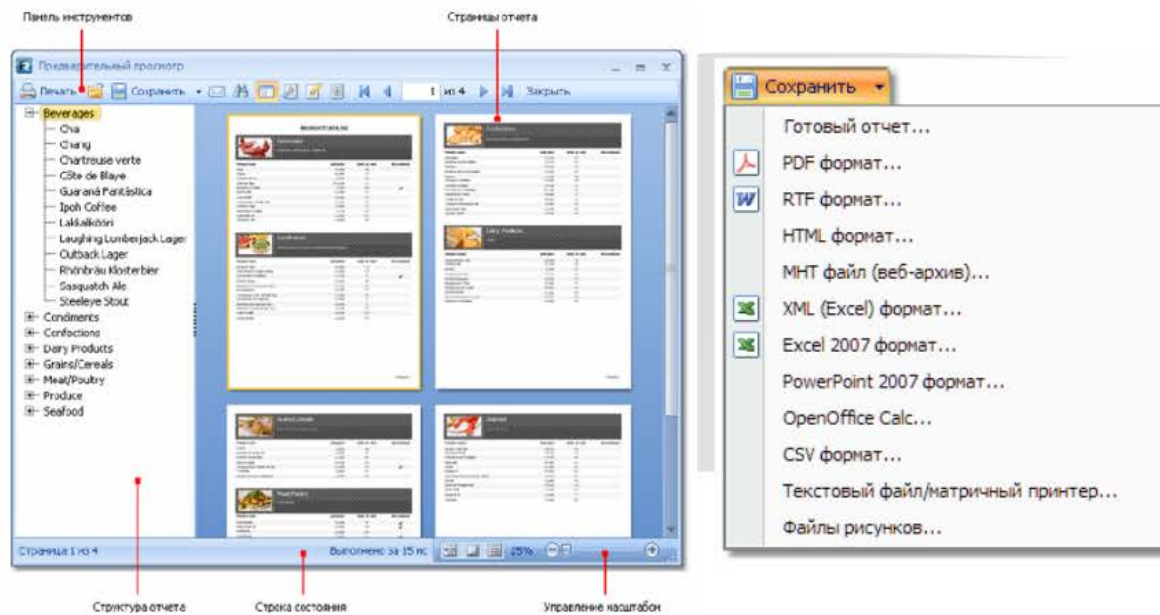
Data sources – business objects collections

```
private List BusinessObject;
```

```
...
```

```
report.RegisterData(BusinessObject, "BusinessObject");
```

Report preview and export filters



Report keeping

- application resources
- file on disc
- field of database
- C# / VB.NET class (for ASP)



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michael@fast-report.com

Questions



Thank you for your attention