



Using
Telerik Document Processing
and
ChartView
for Professional Documents and Reports

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Agenda

- ① **Introduction**
- ② Telerik ChartView
- ③ Telerik Document Processing
- ④ FLY2Rep
- ⑤ Q&A


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About Jo Huys

- Long history with Progress Development
 - Since 1995
 - Progress version 6
- Worked with Progress OpenEdge on different platform
 - Windows, Unix, OS/400, ...
- Also some .NET C# experience since 2004
 - Winforms
 - Webforms
 - ASP.NET MVC
- Specialized in Application Development and Framework Development for Progress


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About BinteQ


- Located in Puurs (near Antwerp), Belgium
- Unique team of Progress OpenEdge Developers
 - Each member having +15 years Progress OpenEdge experience
- Focus on:
 - Enterprise ERP Solutions
 - Development Frameworks (Desktop, Mobile, Web)
 - Migration Strategies
- Serving World-wide customer base
 - Each having unique requirements


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- ① Introduction
- ② **Telerik ChartView**
- ③ Telerik Document Processing
- ④ Fly2Rep
- ⑤ Q&A

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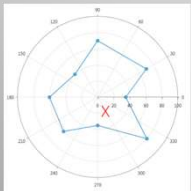
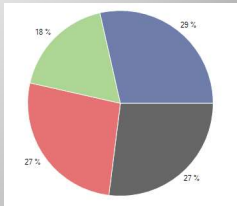
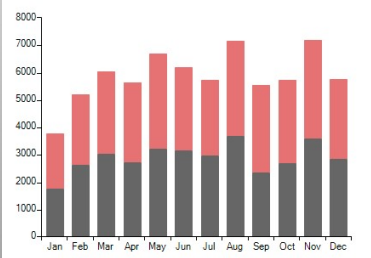
Telerik ChartView


A control that offers drawing capabilities


- Setup design-time or through code
- User interaction

3 types

- Cartesian
- Polar
- Pie


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 **Telerik ChartView - features**

Basic features

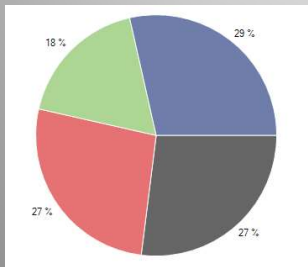
- Title
- Legend
- Labels
- ChartGrid
- Themes & custom themes
- Export

- Drill Down
- Selection

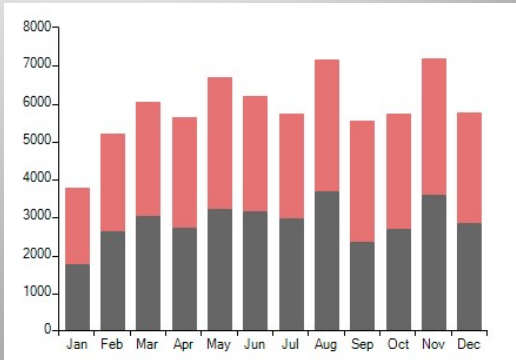
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 **Telerik ChartView – short demo**


Area – Bar – Line – FastLine – Stepline – Scatter – ScatterArea
ScatterLine – Bezier – Bubble Pie – Donut – Radar...




Segment Color	Percentage
Blue	29%
Red	27%
Black	27%
Green	18%



Month	Dark Grey Segment (Approx.)	Red Segment (Approx.)	Total (Approx.)
Jan	1800	2000	3800
Feb	2500	2500	5000
Mar	3000	3000	6000
Apr	2800	2800	5600
May	3200	3400	6600
Jun	3100	3000	6100
Jul	2900	2800	5700
Aug	3600	3400	7000
Sep	2300	3200	5500
Oct	2700	3000	5700
Nov	3500	3500	7000
Dec	2800	2900	5700


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What is Telerik Document Processing?

Telerik Document Processing is a bundle of libraries


- UI-independent
- cross-platform

Enabling you to process the most commonly used document formats
DOCX – XLSX – CSV – RTF – TXT – HTML – PDF – ZIP

- flow
- fixed
- spreadsheet.


Without external dependencies.


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Telerik Document Processing - components


Component	Support document type
RadZipLibrary	ZIP
RadWordsProcessing	DOCX, HTML, RTF, TXT and export PDF
RadPdfProcessing	PDF
RadSpreadProcessing RadSpreadStreamProcessing	XLSX, CSV, TXT and export PDF


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- ③ Telerik Document Processing
 - ① RadWordsProcessing
 - ② RadSpreadProcessing & RadSpreadStreamProcessing
 - ③ RadPDFProcessing
 - ④ RadZipLibrary
- ④ Fly2Rep
- ⑤ Q&A

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TDP – RadWordsProcessing

RadWordsProcessing

- create, modify and export documents to a variety of formats.
DOCX, HTML, RTF, TXT
- you can access each element in the document and modify, remove it or add a new one
- save as a stream, as a file, or send it to the client browser
- Flow type

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TDP – RadWordsProcessing - assemblies

Required assemblies

- **Telerik.Windows.Documents.Core.dll**
- **Telerik.Windows.Documents.Flow.dll**
- **Telerik.Windows.Zip.dll**

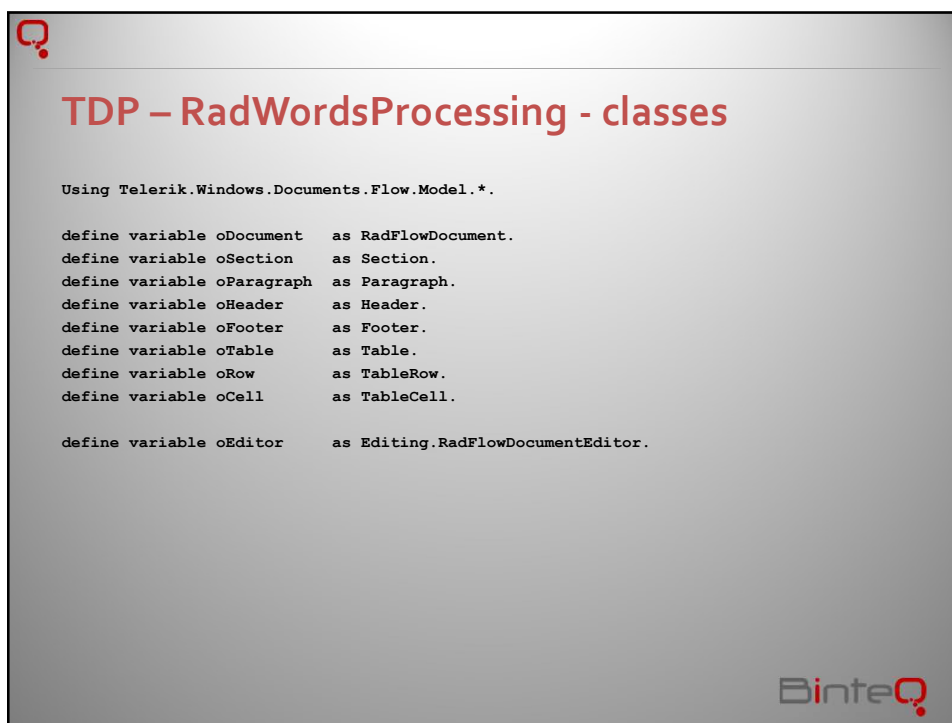
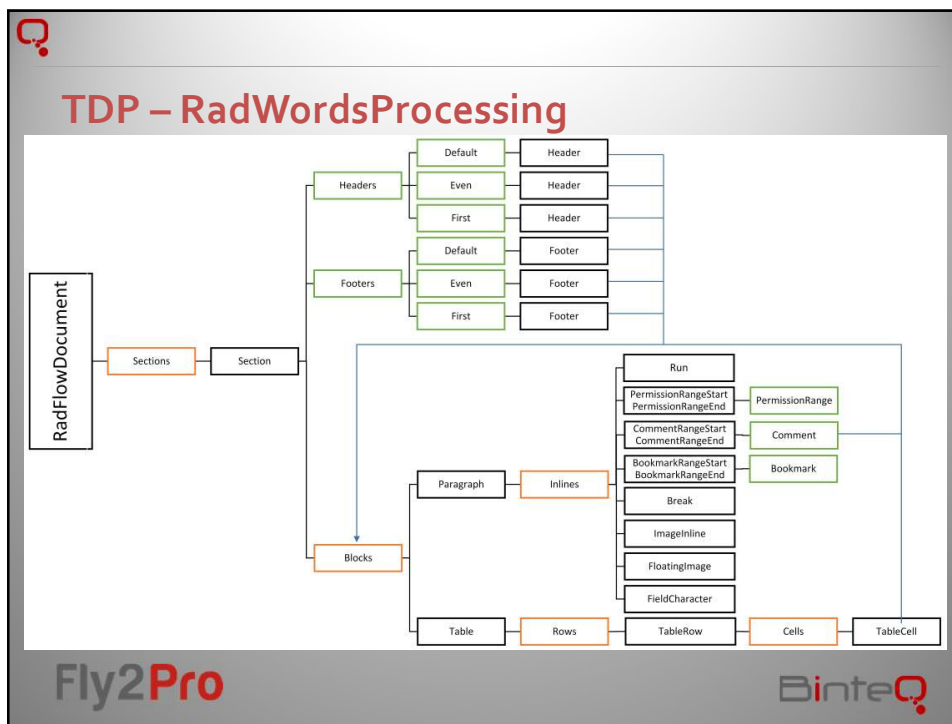
Export to PDF required?


- **Telerik.Windows.Documents.Flow.FormatProviders.Pdf.dll**
- **Telerik.Windows.Documents.Fixed.dll**

To handle colors, shapes and other properties

- **WindowsBase.dll**
- **PresentationCore.dll**
- **PresentationFramework.dll**

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TDP – RadWordsProcessing - features

Most important features

- Read, create and update documents
 - Sections, paragraphs, images, header and footers, tables, bookmarks, comments.
- Clone, merge, insert a document
- Insert a document element
- Find and Replace
- Tabstops
- Mail merge
- Theme & Style
- Export to different formats








TDP – RadWordsProcessing - export

Supported export formats:
DOCX – RTF – TXT – HTML – PDF

See [Format & Conversion](#)


Feature	Docx Export	Docx Import	RTF Export	RTF Import	HTML Export	HTML Import	PDF Export
Text Formatting	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Font Properties	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Text Size	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Baseline Alignment	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Paragraph Options	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Text Alignment	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Text Spacing	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Text Indent	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Shading	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Sections	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Not applicable
Page/Section Headers	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Supported
Page Size and Position	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Supported
Page Orientation	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Supported
Page Number	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Section Breaks	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Supported
Columns	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Supported
Watermark	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Supported
Headers/Footers	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Supported
Section Vertical Alignment	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Supported
Page Numbering Settings	Supported	Supported	Supported	Supported	Not applicable	Not applicable	Supported
Tables	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Table Support	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Header Tables	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Merged Cells	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Flanking Tables	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Images	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Inline Images	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Picture Images	Supported	Supported	Supported	Supported	Partially Supported	Partially Supported	Supported
Styles	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Style Support	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Section Styles	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Themes	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Conditional Table Cells	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Lists	Supported	Supported	Supported	Supported	Supported	Supported	Supported
List Support	Supported	Supported	Supported	Supported	Supported	Supported	Supported
List Styles	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Fields	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Equations	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Equation Fields	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Date and Time	Supported	Supported	Supported	Supported	Supported	Supported	Partially Supported
Fields	Supported	Supported	Supported	Supported	Supported	Supported	Partially Supported
Merge Fields	Supported	Supported	Supported	Supported	Not applicable	Supported	Partially Supported
Document Variables	Supported	Supported	Supported	Supported	Not applicable	Supported	Supported
Other Fields	Partially Supported	Partially Supported	Partially Supported	Partially Supported	Not applicable	Partially Supported	Partially Supported
Revisions	Supported	Supported	Supported	Supported	Supported	Supported	Supported
Document Properties	Supported	Supported	Supported	Supported	Supported	Supported	Not applicable
Track Changes	Supported	Supported	Supported	Supported	Supported	Supported	Not applicable
Other Document	Supported	Supported	Supported	Supported	Supported	Supported	Not applicable
Bookmarks	Supported	Supported	Supported	Supported	Supported	Supported	Supported




TDP – RadWordsProcessing – code example

- Code example
- Performance test



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 - ② **RadSpreadProcessing & RadSpreadStreamProcessing**
 - ③ RadPDFProcessing
 - ④ RadZipLibrary
- ④ Fly2Rep
- ⑤ Q&A

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TDP - RadSpreadProcessing

RadSpreadProcessing

- create, import and export spreadsheet documents
- you can access each worksheet/cell in the document and modify, remove it or add a new one
- save as a stream, as a file, or send it to the client browser
- Spreadsheet type

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TDP – RadSpreadProcessing - assemblies

Required assemblies

- Telerik.Windows.Documents.Core.dll
- Telerik.Windows.Documents.Spreadsheet.dll
- Telerik.Windows.Zip.dll

Export to XLSX or PDF required?

- Telerik.Windows.Documents.Spreadsheet.FormatProviders.OpenXml.dll
- Telerik.Windows.Documents.Fixed.dll
- Telerik.Windows.Documents.Spreadsheet.FormatProviders.Pdf.dll

To handle colors, shapes and other properties

- WindowsBase.dll
- PresentationCore.dll
- PresentationFramework.dll


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TDP – RadSpreadProcessing - classes

```
define variable workbook      as Telerik.Windows.Documents.Spreadsheet.Model.Workbook.  
define variable worksheet    as Telerik.Windows.Documents.Spreadsheet.Model.Worksheet.  
define variable cellRange    as Telerik.Windows.Documents.Spreadsheet.Model.CellRange.  
define variable currentSelection as Telerik.Windows.Documents.Spreadsheet.Model.CellSelection.  
define variable currentCell  as Telerik.Windows.Documents.Spreadsheet.Model.CellIndex.
```


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TDP – RadSpreadProcessing - features

Most important features

- Read, create and update documents
 - Workbook, Worksheets, Rows, Columns, Cells, CellRange, Hyperlinks, Images, Protection, Header and footers
- Insert, copy, merge and unmerge cells
- Find and replace
- Show/hide gridlines
- Show/hide rows/columns
- Freezing panes
- Formulas
- Document Themes
- Cell formatting & style
- Shapes and images
- Sorting and Filtering
- Scaling
- Grouping
- Export to xlsx, csv,...


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 **TDP – RadSpreadProcessing**

XLSX – PDF – CSV - TXT


See [Format and Conversions](#)


Feature	Supported	Comment
Text Formatting		
Font Family	Yes	
Font Size	Yes	
Font Color	Yes	
Bold	Yes	
Italic	Yes	
Underline	Yes	
Text Horizontal Alignment	Yes	
Text Vertical Alignment	Yes	
Text Wrapping	Yes	
Indent	Yes	
Cells		
Merge Cells	Yes	
Number Format	Yes	
Borders	Yes	
Background Fill	Yes	
Default Fill	Yes	
Cell Locked State	Yes	
Cell Styles	Yes	
Style Name	Yes	
Include Number Format Option	Yes	
Include Alignment Option	Yes	
Include Font Properties Option	Yes	
Include Borders Option	Yes	
Include Fill Option	Yes	
Include Protection Option	Yes	
Themes		
Document Theme	Yes	
Color Scheme	Yes	
Font Scheme	Yes	
Hyperlinks		
Worksheet	Yes	
Place in Document	Yes	
E-mail address	Yes	
Worksheet protection		
Structure protection system	Yes	
Content protection system	Yes	
Worksheet protection		
Allow Changes in Cells/Rows/Columns Format Option	Yes	
Allow Inserting Rows/Columns Option	Yes	
Allow Deleting Rows/Columns Option	Yes	
Allow Sort Option	Yes	
Allow Filter Option	Yes	
Formulas		
Formula Values	Yes	

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 **TDP - RadSpreadStreamProcessing**


- Export large XLSX and CSV spreadsheet documents
- low memory footprint
- great performance
- Writes directly to a stream in stead of model


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TDP – RadSpreadStream vs RadSpread

	RadSpreadStreamProcessing	RadSpreadProcessing
Create	X	X
Modify		X
Append	X	X
Read		X
Specific workflow	X	


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TDP – RadSpreadStream vs RadSpread

When using RadSpreadStream?

- Large amount of data
- When performance is / becomes an issue
- When only creation or adding data is needed

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TDP – RadSpreadStream – code example

- Code example – from document to report
- Performance test




KEEP
CALM
AND
WRITE
4GL


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TDP - RadPdfProcessing


RadPdfProcessing

- creation, import and export of PDF documents.

The API of RadPdfProcessing contains 2 different editors,

- editing in a flow-like manner
- using the much more powerful and flexible fixed document structure and drawing on the page

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TDP – RadPdfProcessing - assemblies

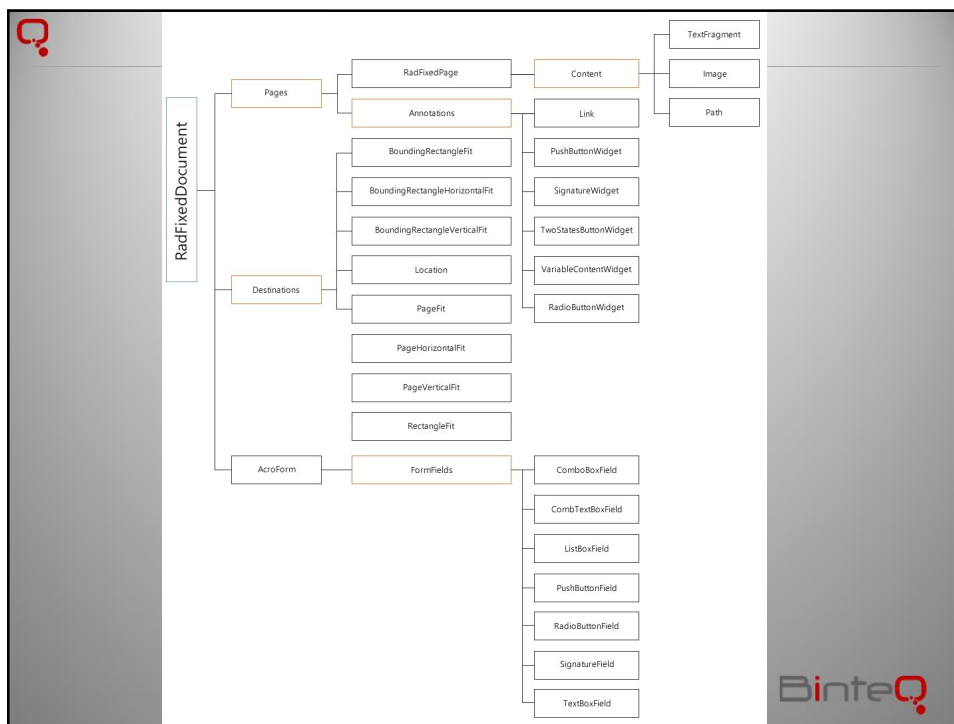
Required assemblies

- **Telerik.Windows.Documents.Core.dll**
- **Telerik.Windows.Documents.Fixed.dll**
- **Telerik.Windows.Zip.dll**
- **Telerik.Windows.Documents.Fixed.FormatProviders.Pdf.dll**

To handle colors, shapes and other properties

- **WindowsBase.dll**
- **PresentationCore.dll**
- **PresentationFramework.dll**

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TDP – RadPdfProcessing - classes

```

define variable oPDFDocument as Telerik.Windows.Documents.Fixed.Model.RadFixedDocument.
define variable oPDFPage as Telerik.Windows.Documents.Fixed.Model.RadFixedPage.
define variable oTextFragment as Telerik.Windows.Documents.Fixed.Model.Text.TextFragment.
define variable oImage as Telerik.Windows.Documents.Fixed.Model.Objects.Image no-undo
define variable oTable as Telerik.Windows.Documents.Fixed.Model.Editing.Tables.Table no-undo
define variable oTableCell as Telerik.Windows.Documents.Fixed.Model.Editing.Tables.TableCell no-undo
define variable oTableRow as Telerik.Windows.Documents.Fixed.Model.Editing.Tables.TableRow no-undo


define variable oDocumentEditor as Telerik.Windows.Documents.Fixed.Model.Editing.RadFixedDocumentEditor.
define variable oPageEditor as Telerik.Windows.Documents.Fixed.Model.Editing.FixedContentEditor.
    
```



TDP – RadPdfProcessing - features

Most important features

- Create, import and export documents
 - Block, List, Table (row/cell),
 - Text and graphics properties
- Flow, Fixed
- Pages, TextFragments, Images, Tables,
- Clone, merge documents or pages
- Forms – reusable
- Interactive forms
- Digital Signature
- Export to PDF, TXT.

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TDP – RadPdfProcessing – export


Supported export formats

PDF - TXT

2 options to import and export

- PdfStreamWriter
 - ideal for adding content (below or above)
 - Encryption not supported
 - Better performance
- PdfFormatProvider
 - Ideal for reading or modifying content

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TDP – RadZipLibrary

Assembly
Telerik.Windows.Zip.dll

Features


- Read, create, save zip file
- Add, update or delete entry in a zip file
- Password protection
- Compressed stream
- Compression options


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Telerik Document Processing - Conclusion


- Stable product
- Sufficient features available to produce high quality documents.
- Always room for improvement or more features
 - Pivot
 - Charts
 - Speed
 - Export to PDF
- No 3th party software required
- Ideal for documents
- Not only for documents but als for creating reports, certainly in combination with ChartView


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Principles


Stability – Uniformity – Continuity

Fly2Rep / ERP / custom made applications

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 ABL	 OO ABL	 .NET	 TELERIK	 INFRAGISTICS
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More information?


Telerik website

- [General Information about Telerik Document Processing](#)
- [API](#)
- Several (.NET) code examples for each document type

Let's share experience


- Jo.Huys@BinteQ.com

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Q&A



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Using
Telerik Document Processing
and
ChartView
for Professional Documents and Reports

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