



## TMS TAdvRichEditor DEVELOPERS GUIDE

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## Availability

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TMS TAdvRichEditor is available as VCL component for Delphi and C++Builder.

TMS TAdvRichEditor is available for Delphi XE,XE2,XE3,XE4,XE5,XE6,XE7,XE8,10 Seattle, 10.1 Berlin, 10.2 Tokyo & C++Builder XE,XE2,XE3,XE4,XE5,XE6,XE7,XE8, 10 Seattle, 10.1 Berlin, 10.2 Tokyo.

TMS TAdvRichEditor has been designed for and tested with: Windows Vista, Windows 7, Windows 8, Windows 10.

## Online references

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TMS software website:

<http://www.tmssoftware.com>

TMS TAdvRichEditor page:

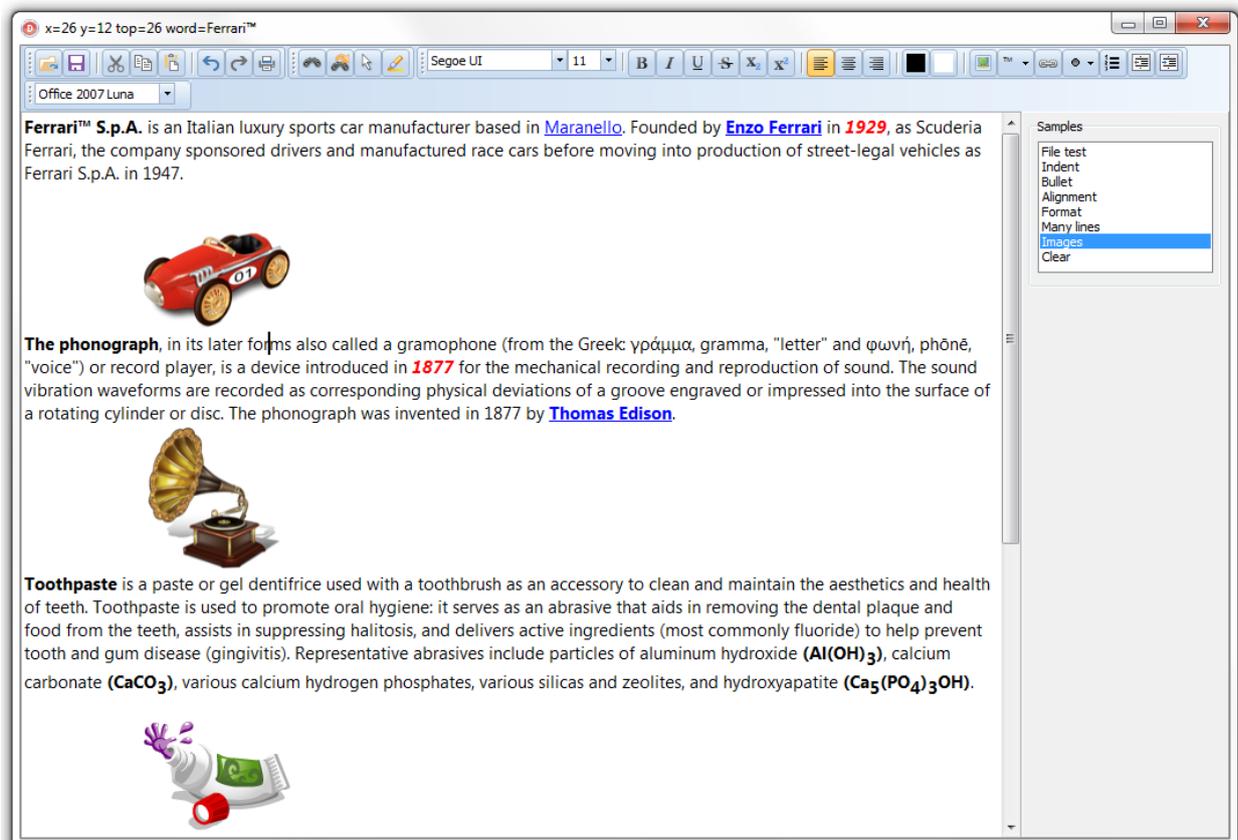
<http://www.tmssoftware.com/site/advricheditor.asp>

## Description

TAdvRichEditor is a compact light-weight wysiwyg editor for formatted text. TAdvRichEditor can include formatted text with bullets, hyperlinks, images, indenting, aligned paragraphs. It offers functions for merging, highlighting text, find & replace, undo/redo, clipboard, printing, auto-correct, emoticons.

TAdvRichEditor stores its text natively in the .RTE file format. In addition, TAdvRichEditor can import and export files in following formats: .HTML, .RTF, .TXT.

When used as part of the TMS Component Pack (<http://www.tmssoftware.com/site/tmspack.asp>), docking toolbars or ribbon toolbars are included to perform clipboard functions, undo/redo, formatting, paragraph alignment, inserting bullets, pictures, hyperlinks, special characters. Also available in combination with the TMS Component Pack is export to PDF and spell check.



## Organization

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The core component is TAdvRichEditor. This is a standalone component that can be used as-is for WYSIWYG editing of formatted text. It comes with several toolbars (in the TMS Component Pack) that can be used to quickly setup a rich editor or its many actions can be used to create a specific user interface around the TAdvRichEditor according to your needs.

Internally the TAdvRichEditor consists of a simple DOM. This DOM is a generic list of document elements. Different types of document elements exist such as a text element, image element, linebreak element, bullet element, ... Each document element has several attributes that determine the appearance in the document. While the TAdvRichEditor provides a large series of methods to add or remove elements from the DOM, it is also accessible via TAdvRichEditor.Context.Content. It is recommended though that the API used instead of direct DOM manipulation.

## Getting Started

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Drop a TAdvRichEditor on the form. The component with its default settings is ready for use. Entering of text can be done with default font & alignment. For ease of use, connect a TAdvRichEditorEditButtonBar and TAdvRichEditorFormatButtonBar that presents most of the built-in actions as a button bar or use the docking toolbars TAdvRichEditorEditToolBar, TAdvRichEditorFormatToolBar, TAdvRichEditorEditingToolBar, TAdvRichEditorParagraphToolBar to apply all kinds of formatting to the text without writing any code or use its ribbon equivalents for a wywiwyg editor with ribbon UI.

## Properties & Events

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### Properties

|                              |  |
|------------------------------|--|
| Author                       | Sets the author of the document that will be persisted when saving to .RTE file format.  |
| AutoCorrect                  | Contains the settings for auto-correction. TAdvRichEditor.AutoCorrect.OldValue is the string list of words to be replaced by corresponding values in the string list<br>TAdvRichEditor.AutoCorrect.NewValue.<br>Auto correct is enabled via setting<br>TAdvRichEditor.AutoCorrect.Active = true.<br>To add pairs of old/new values, use<br>TAdvRichEditor.AutoCorrect.Add(OldValue, NewValue); |
| Color                        | Sets the default background of the TAdvRichEditor  |
| Comments                     | Sets comments for the document that will be persisted when saving to .RTE file format.   |
| Emoticons                    | Container of emoticon images that are used to replace common emoticon mnemonics like :), :(, ...   |
| GraphicSelection             | Sets the appearance of the grips that appear when selecting graphics in the TAdvRichEditor   |
| GraphicSelection.BorderColor | Sets the border color of graphic item grips  |
| GraphicSelection.Color       | Sets the background color of graphic item grips  |
| GraphicSelection.Style       | Selects the style between rectangular or circular for the grips  |
| HighlightColor               | Sets the background color for highlighted text in the TAdvRichEditor   |
| HighlightTextColor           | Sets the text color for highlighted text in the TAdvRichEditor   |
| LastModifiedBy               | Sets the name of the person who last modified the content of the document and this name is persisted in the .RTE file  |
| PictureContainer             | Container of images that can be assigned to  |

|                    |  |
|--------------------|--|
|                    | handle images inserted in the TAdvRichEditor referenced by name. PictureContainer images are inserted via TAdvRichEditor.AddNamedPicture() or TAdvRichEditor.InsertNamedPicture(). |
| ReadOnly           | When true, the content of the document cannot be altered but selection is possible   |
| SelectionColor     | Sets the background color for selection in the TAdvRichEditor  |
| SelectionTextColor | Sets the text color for selection in the TAdvRichEditor  |
| Tags               | Sets tags for the document that will be persisted when saving to .RTE file format.   |
| URLAuto            | When set to uAuto (default), typing text starting with file://, http(s)://, ftp://, mailto: will automatically be displayed as URL in the TAdvRichEditor.                          |
| URLColor           | Sets the text color for hyperlinks in the TAdvRichEditor   |
| Version            | Read-only property returning the version of the component  |

## Events

|                    |  |
|--------------------|--|
| OnCaretChanged     | Event triggered whenever the caret changes in the TAdvRichEditor   |
| OnCanSelectGraphic | Event triggered when a graphic element is clicked with allow parameter to control whether the graphic element can be selected or not   |
| OnCanSizeGraphic   | Event triggered when the mouse is over a corner of a graphic element to control whether the graphic element can be sized or not  |
| OnClick            | Event triggered when the editor is clicked   |
| OnClickHyperlink   | Event triggered when a hyperlink is clicked in the editor. The URL for the hyperlink is returned as a parameter  |
| OnCorrectWord      | Event triggered when a word is entered. The event has var parameters AWord: string and Error: Boolean. When Error is set to true, the last entered word is displayed with red error underline. When AWord is modified, this modified word is entered into the editor instead of the originally entered word. |
| OnDrawGraphic      | Event triggered for drawing custom graphic elements in the TAdvRichEditor. This event returns the canvas and rectangle where to draw the custom graphic and an ID for the graphic element  |
| OnEnter            | Event triggered when the TAdvRichEditor gets focus   |
| OnEnterWord        | Event triggered when one or more characters were entered before a word boundary. The event returns the word just entered   |
| OnExit             | Event triggered when the TAdvRichEditor loses focus  |
| OnSelectionChanged | Event triggered whenever the selection changes in the TAdvRichEditor   |

## Methods

|  |   |
|--|---|
| HasSelection: boolean;   | Function returns true when there is a selection in the TAdvRichEditor   |
| GetWordAndIndexAtCaret(var AValue: string; var AIndex: integer);   | Returns the word at caret position and the index of the element containing the word   |
| UpdateWordAndIndexAtCaret(AValue: string; AIndex: integer);  | Replaces the word at document element at caret position at character index AIndex by AValue   |
| XYToElement(X,Y: integer; var el: TREElement): boolean;  | Retrieves the document element at mouse X,Y coordinates   |
| XYToChar(X,Y: integer; el: TREElement; var CX,CY: integer): integer;   | Converts the X,Y mouse coordinates to character position in the document text   |
| XYToWord(X,Y: integer; el: TREElement): string; overload;  | Returns the word and document element at mouse coordinates X,Y  |
| XYToWord(X,Y: integer): string; overload;  | Returns the word at mouse coordinates X,Y   |
| XYToCaret(X,Y: integer); overload;   | Sets the caret at mouse X,Y coordinates   |
| XYToCaret(X,Y: single); overload;  |   |
| IsCaretInBulletList(var AType: TBulletType; var AIndex, AIndent: integer): boolean;  | Returns true when the caret is within a list of bulleted items and when so, returns the bullet type, the index of the item in the list and the indent of the bulleted items |
| AddText(AValue: string): TTextElement; overload;   | Appends text to the TAdvRichEditor and returns a text document element containing this added text   |
| AddText(AValue: string; AColor: TColor): TTextElement; overload;   | Appends text with a specific text color to the TAdvRichEditor and returns a text document element containing this added text  |
| AddText(AValue: string; AColor: TColor; BkColor: TColor): TTextElement; overload;  | Appends text with a specific text color and background color to the TAdvRichEditor and returns a text document element containing this added text                           |
| AddText(AValue: string; AFont: TFont): TTextElement; overload;   | Appends text with a specific font setting to the TAdvRichEditor and returns a text document element containing this added text  |
| AddText(AValue: string; AFontSize: integer; AFontName: string; AFontStyle: TFontStyles): TTextElement; overload;                         | Appends text with a specific font setting to the TAdvRichEditor and returns a text document element containing this added text  |
| AddText(AValue: string; AAlignment: TAlignment): TTextElement; overload;   | Appends text with a specific alignment to the TAdvRichEditor and returns a text document element containing this added text   |
| AddText(AValue: string; AFontSize: integer; AFontName: string; AFontStyle: TFontStyles; AAlignment: TAlignment): TTextElement; overload; | Appends text with a specific font setting and alignment to the TAdvRichEditor and returns a text document element containing this added text                                |
| AddHyperlink(AValue, AURL: string);  | Sets a hyperlink for the currently selected text in the TAdvRichEditor  |
| AddMultiLineText(AValue: string);  | Appends multiple lines of text as word-wrapped text in the TAdvRichEditor   |
| AddLineBreak: TREElement;  | Appends a linebreak to the TAdvRichEditor and returns a linebreak document element  |
| AddBullet(AType: TBulletType = btCircle);  | Appends a bullet element to the TAdvRichEditor and returns a bullet document element. The bullet types can be:<br>- btSquare  |

|  |   |
|--|---|
|  | <ul style="list-style-type: none"> <li>- btCircle</li> <li>- btArrow</li> <li>- btStar</li> <li>- btTick</li> </ul>   |
| AddImage(Picture: TPicture); overload;   | Appends an image to the TAdvRichEditor and returns a graphic document element. Images of the type BMP, JPEG, GIF, PNG, ICO are supported.   |
| AddImage(Picture: TPicture; AWidth, AHeight: integer); overload;                     | Appends an image with a specific width and height to the TAdvRichEditor and returns a graphic document element. Images of the type BMP, JPEG, GIF, PNG, ICO are supported.        |
| AddImage(FileName: string); overload;  | Appends an image from file to the TAdvRichEditor and returns a graphic document element   |
| AddImage(FileName: string; AWidth, AHeight: integer); overload;                      | Appends an image from file with a specific width and height to the TAdvRichEditor and returns a graphic document element  |
| AddGraphic(AWidth, AHeight: integer; AID: string);                                   | Appends a graphical element with a specific ID to the TAdvRichEditor and returns a graphic document element. This graphical element needs to be drawn via the OnDrawGraphic event |
| AddNamedPicture(AWidth, AHeight: integer; AName: string);                            | Appends an image referenced by the unique name of the picture in an assigned PictureContainer   |
| InsertText(Index: integer; AValue: string): TTextElement; overload;                  | Inserts text in the TAdvRichEditor at document element Index and returns a text document element containing this added text   |
| InsertText(AValue: string): TTextElement; overload;                                  | Inserts text in the TAdvRichEditor at caret position and returns a text document element containing this added text   |
| InsertMultiLineText(AValue: string);   | Inserts text in the TAdvRichEditor at caret position  |
| InsertImage(FileName: string; AWidth: integer = 0; AHeight: integer = 0); overload;  | Inserts an image with a specific width and height at caret position in the TAdvRichEditor and returns an image document element   |
| InsertImage(Picture: TPicture; AWidth: integer = 0; AHeight: integer = 0); overload; | Inserts an image with a specific width and height at caret position in the TAdvRichEditor and returns an image document element   |
| InsertGraphic(ID: string; AWidth, AHeight: integer);                                 | Inserts a custom graphic element with a specific width and height at caret position in the TAdvRichEditor and returns a graphic document element                                  |
| InsertNamedPicture(AName: string; AWidth, AHeight: integer);                         | Inserts an image referenced by the unique name of the picture in an assigned PictureContainer at caret position   |
| InsertChar(ch: char);  | Inserts a character at caret position   |
| InsertBullet(AType: TBulletType = btCircle);   | Inserts a bullet element at caret position in the TAdvRichEditor and returns a bullet document element  |
| DeleteChar;  | Deletes the character at caret position   |
| DeleteCaretElement;  | Deletes the document element where the caret is   |
| DeleteSelection;   | Deletes the selection in the TAdvRichEditor   |
| DeleteSelected;  | Deletes the selected element in case an image or graphical element is selected  |
| SelectedText: string;  | Returns the selected text   |
| SelectWordAtXY(X, Y: integer): string;   | Selects the word in the TAdvRichEditorDocument at mouse coordinates X, Y  |
| SelectWordAtCaret: string;   | Selects the word in the TAdvRichEditorDocument  |

|   |  |
|---|--|
|   | at caret position  |
| WordAtXY(X,Y: integer): string;   | Returns the word at X,Y mouse coordinates  |
| WordAtCaret: string;  | Returns the word at caret position   |
| IsEmpty: boolean;   | Returns true when the document is empty  |
| Merge(NamesAndValues: TStringList);   | Performs merging of mergefields with merge values contained in the stringlist                                    |
| GetMergeFields(AList: TStringList);   | Retrieves a list of merge fields in the current document and fills it via the AList TStringList parameter        |
| Print;  | Prints the TAdvRichEditor document to the active printer   |
| UnSelect;   | Undo any selection in the document   |
| SelectAll;  | Selects all document elements in TAdvRichEditor  |
| SaveToText(AFileName: string);  | Saves the document in TAdvRichEditor as plain text   |
| SetSelectionAttribute(AFont: TFont; AColor: TColor); overload;  | Sets the font and color attribute of the selected text   |
| SetSelectionAttribute(AFont: TFont; AColor: TColor; BkColor: TColor); overload;   | Sets the font, text color and background color attribute of the selected text                                    |
| SetSelectionAttribute(AFontName: string; AFontSize: integer; AFontStyle: TFontStyles; AColor: TColor); overload;          | Sets the font and color attribute of the selected text   |
| SetSelectionAttribute(AFontName: string; AFontSize: integer; AFontStyle: TFontStyles; AColor, BkColor: TColor); overload; | Sets the font, text color and background color attribute of the selected text                                    |
| SetSelectionAttribute(AAlignment: TAlignment); overload;  | Sets the alignment of the selected text  |
| SetSelectionAttribute(AError: boolean); overload;   | Sets the selected text with red error underlining or remove error underlining                                    |
| SetSelectionColor(AColor: TColor);  | Sets the text color of the selected text   |
| SetSelectionBkColor(AColor: TColor);  | Sets the background color of the selected text   |
| SetSelectionBold(DoBold: boolean);  | Sets the selected text bold or remove bold   |
| SetSelectionItalic(DoItalic: boolean);  | Sets the selected text italic or remove italic   |
| SetSelectionUnderline(DoUnderline: boolean);  | Sets the selected text underlined or remove underlined   |
| SetSelectionStrikeOut(DoStrikeOut: boolean);  | Sets the selected text strikeout or remove strikeout   |
| SetSelectionError(DoError: boolean);  | Sets the selected text with red error underlining or remove error underlining                                    |
| SetSelectionSubscript(DoSubScript: boolean);  | Sets the selected text subscript or remove subscript   |
| SetSelectionSuperscript(DoSuperScript: boolean);  | Sets the selected text superscript or remove superscript   |
| SetSelectionIndent(AIndent: integer);   | Sets the indent on the selected text   |
| SetSelectionBullets(AType: TBulletType); overload;  | Sets bullets for the selected text. Each line separated by a linebreak gets a bullet. AType sets the bullet type |
| SetSelectionHyperlink(AURL: string);  | Sets a hyperlink for the text selected element in the document   |
| SetSelectionFontName(AName: string);  | Sets the font face name for the selected text  |
| SetSelectionFontSize(ASize: integer);   | Sets the font size for the selected text   |
| SetSelectionHighlight;  | Sets the selected text in highlight text / background colors   |
| SetSelectionMergeField(AMergeName: string);   | Defines a mergefield value for the selected text   |
| IsSelectionBold: boolean;   | Returns true when the selected text font style is  |

|  |  |
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|  | <b>bold</b>  |
| IsSelectionItalic: boolean;                                      | Returns true when the selected text font style is italic   |
| IsSelectionUnderline: boolean;                                   | Returns true when the selected text font style is underline  |
| IsSelectionStrikeOut: boolean;                                   | Returns true when the selected text font style is strikeout  |
| IsSelectionSubscript: boolean;                                   | Returns true when the selected text font style is subscript  |
| IsSelectionSuperscript: boolean;                                 | Returns true when the selected text font style is superscript  |
| IsSelectionLeft: boolean;  | Returns true when the selected text alignment is left aligned  |
| IsSelectionCenter: boolean;                                      | Returns true when the selected text alignment is center aligned  |
| IsSelectionRight: boolean;                                       | Returns true when the selected text alignment is right aligned   |
| GetSelectionTextColor: TColor;                                   | Returns the text color for the selected text   |
| GetSelectionBkColor: TColor;                                     | Returns the background color for the selected text   |
| GetSelectionIndent: integer;                                     | Returns the indent of the selected text  |
| GetSelectionFontName: string;                                    | Returns the font face name for the selected text   |
| GetSelectionFontSize: integer;                                   | Returns the font size for the selected text  |
| GetSelectionBullet: TBulletType;                                 | Returns the bullet type used for the selected text   |
| Clear;   | Removes all elements from the document   |
| ClearErrors;   | Removes all error marking on text in the document  |
| ClearSelection;  | Clears the selection in the document   |
| SelectText(FromChar, ALength: integer);                          | Selects text in the TAdvRichEditor based on character position of the text and length in characters  |
| property Selection: TSelection read FSelection write FSelection; | Allows to get and set the selection in the TAdvRichEditor based on document elements for the selection start and selection end and character positions within the selections |
| property Caret: TCaret read FCaret write FCaret;                 | Allows to get and set the caret based on document elements and character position within the selected document element   |
| property Selected: TREElement read FSelected write FSelected;    | Get or set the selected (graphical) document element   |
| ScrollToCaret;   | Vertically scroll the TAdvRichEditor to make the caret visible   |
| PlainText: string;   | Returns the text of the TAdvRichEditor document as plaintext   |
| LoadFromTextFile(const FileName: string);                        | Loads the document from a plain text file  |
| LoadFromTextFile(const FileName: string; Encoding: TEncoding);   | Loads the document from a plain text file with optional encoding parameter   |
| LoadFromStream(const AStream: TStream);                          | Load a document in the .RTE file format from stream  |
| InsertFromStream(const AStream: TStream; f: double);             | Inserts plain text from file at caret position   |
| LoadFromFile(const FileName: string);                            | Load a document from the .RTE file format  |
| SaveToFile(const FileName: string);                              | Save a document to the .RTE file format  |
| SaveToStream(const AStream: TStream);                            | Save a document in the .RTE file format to stream  |
| SaveSelectionToStream(const AStream: TStream);                   | Saves the current selected document elements in .RTE file format to stream   |

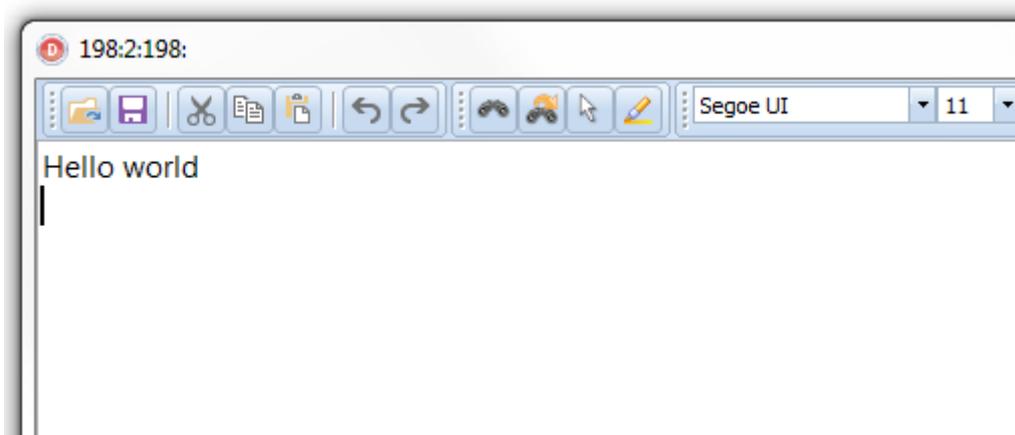
|   |  |
|---|--|
| FindFirst(AText: string; MatchCase: boolean = false): boolean;                  | Finds the first occurrence of text from the document origin                              |
| FindNext: boolean;  | Finds the next occurrence of text from the position of the last find operation           |
| ReplaceFirst(AText, AReplacement: string; MatchCase: boolean = false): boolean; | Replaces the first occurrence of text from the document origin                           |
| ReplaceNext: boolean;   | Replaces the next occurrence of text from the position of the last find operation        |
| Highlight(AText: string; MatchCase: boolean = false): boolean;                  | Highlight the text in the document with or without case sensitivity in the document      |
| UnHighlight;  | Undo any previous highlight  |
| CanUnindent: boolean;   | Returns true when the selection in the document is indented (and thus can be unindented) |
| CanUndo: boolean;   | Returns true when an Undo operation is possible  |
| CanRedo: boolean;   | Returns true when a Redo operation is possible   |
| Undo;   | Performs Undo  |
| Redo;   | Performs Redo  |
| BeginUpdate;  | Use to block updates when doing many programmatic manipulations in the TAdvRichEditor    |
| EndUpdate;  | Use to block updates when doing many programmatic manipulations in the TAdvRichEditor    |

## Programmatic access to the document

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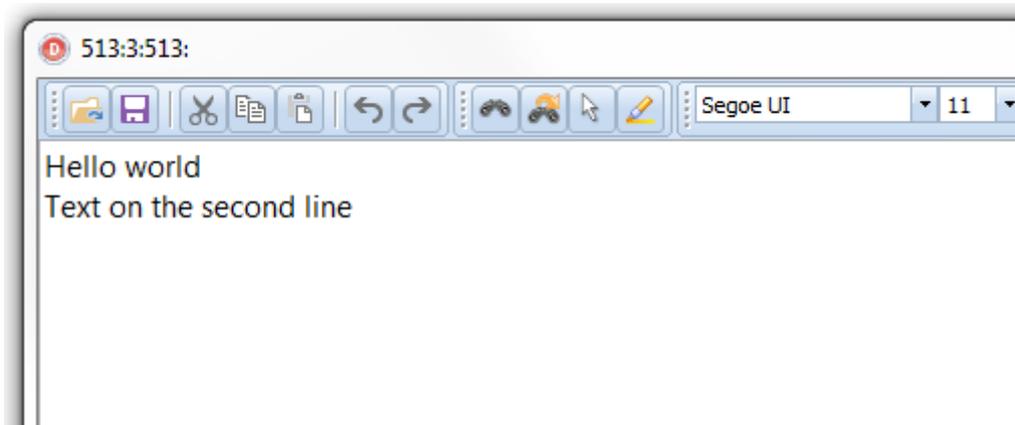
Text can be inserted in TAdvRichEditor in various ways. To start with call:

```
AdvRichEditor.AddText('Hello world');
```



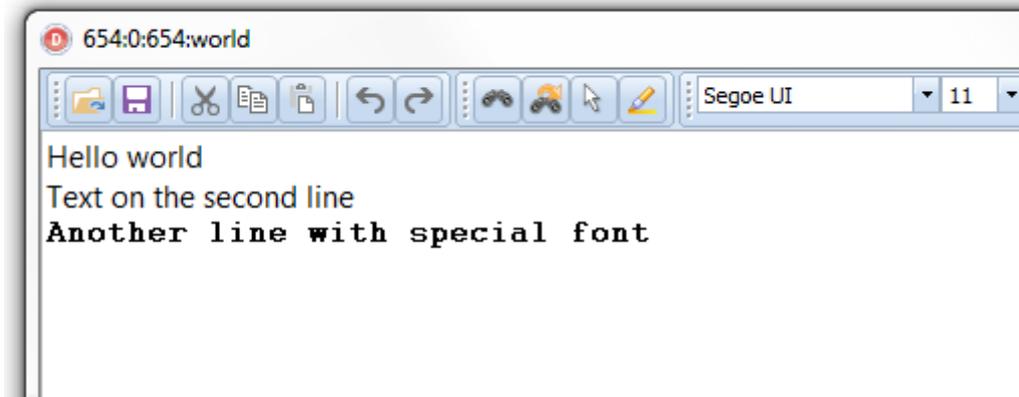
Add text on the next line with:

```
AdvRichEditor.AddLineBreak;  
AdvRichEditor.AddText('Text on the second line');
```



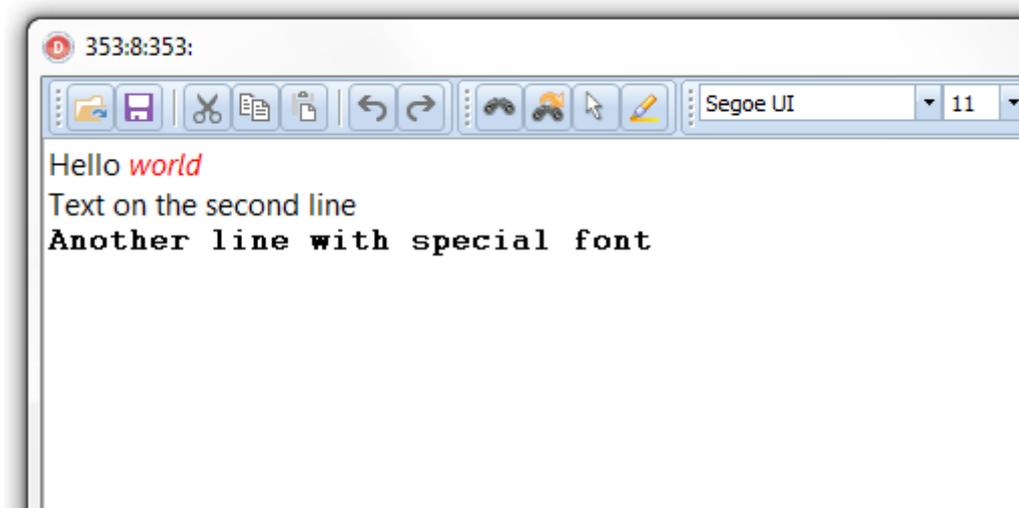
To add text with a different font than default font, use:

```
AdvRichEditor.AddLineBreak;  
AdvRichEditor1.AddText('Another line with special  
font',12,'Courier',[fsBold]);
```



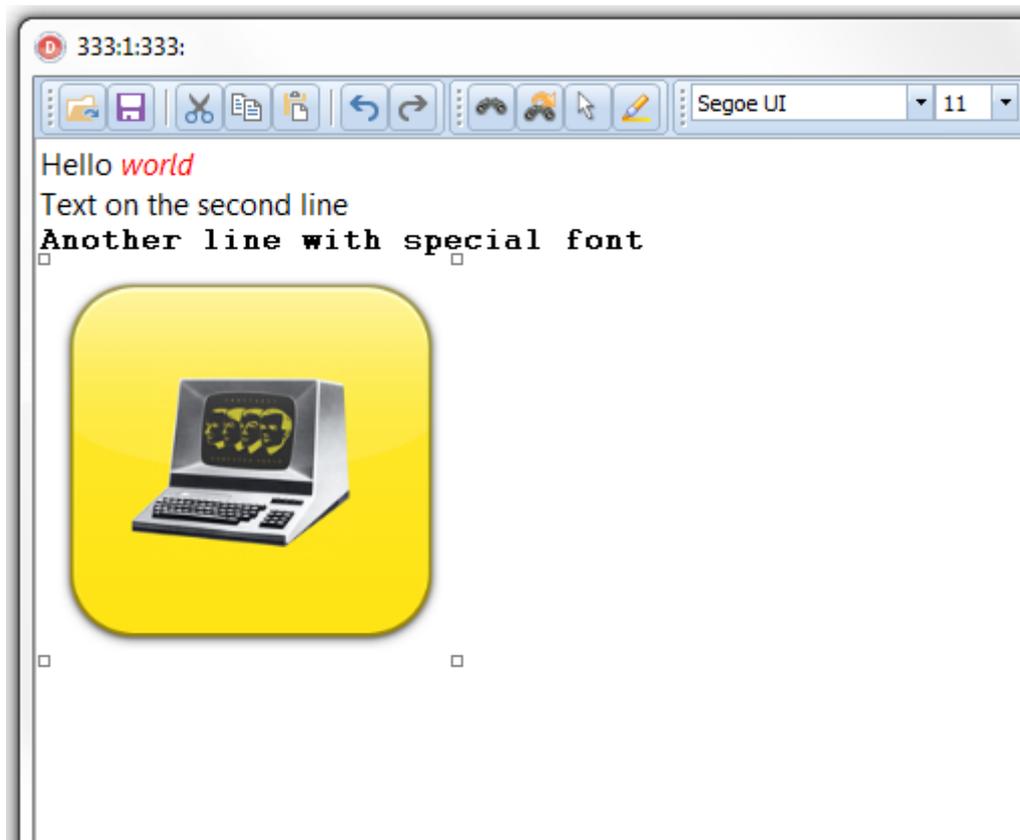
To change attributes of text in the TAdvRichEditor, perform a selection based on index of the text and length. For example, to change the color of “world” on the first line, set a selection from character 6 for 5 characters (character index starts at zero) and set an attribute for the selection followed by remove the selection itself:

```
AdvRichEditor1.SelectText(6, 5);
AdvRichEditor1.SetSelectionColor(clRed);
AdvRichEditor1.SetSelectionItalic(True);
AdvRichEditor1.ClearSelection;
```



To add images to the TAdvRichEditor, use:

```
AdvRichEditor1.AddImage('.\sample.png');
```

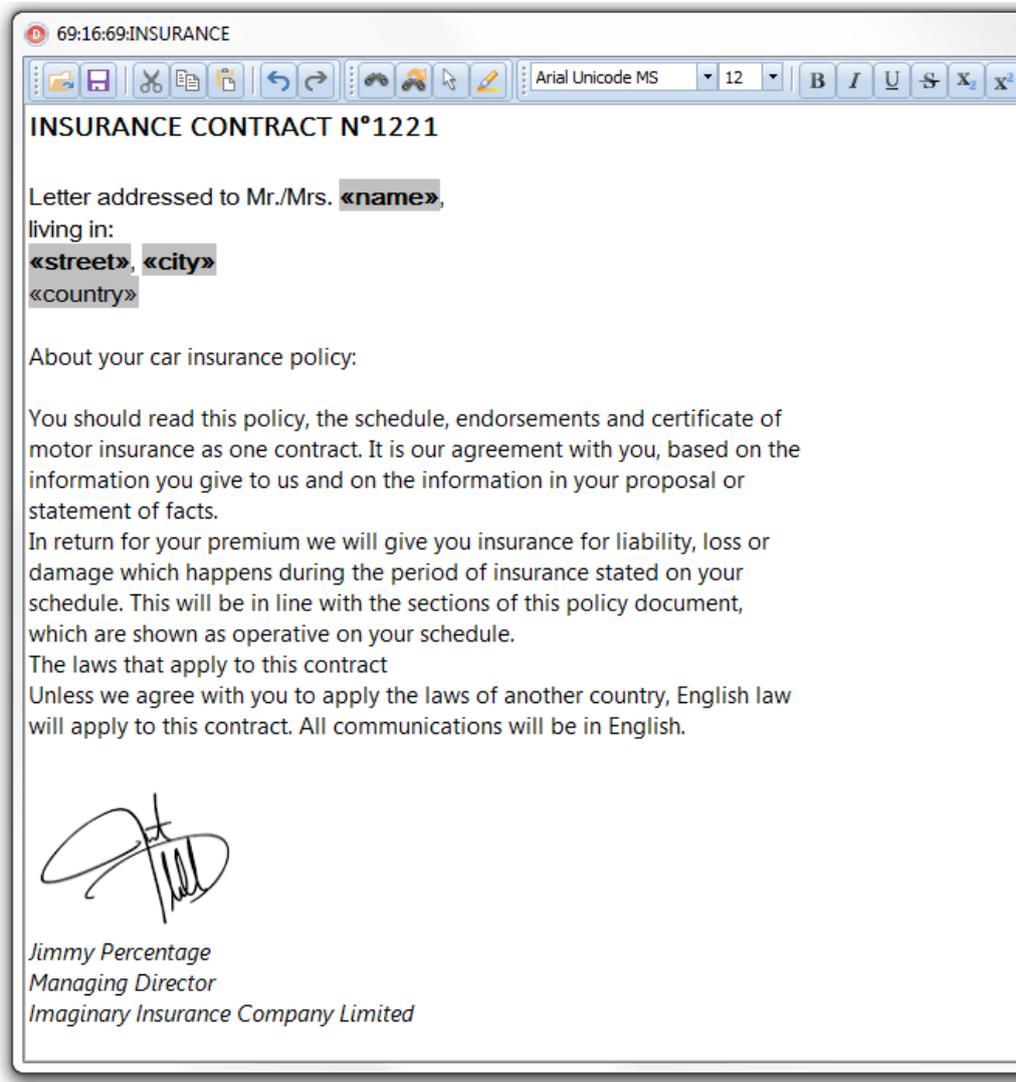


## Using merge fields

Via merge fields, specific places in the document can be quickly replaced during a merge operation. To perform merging, first insert merge fields in the document. Merge fields are pieces of text that get a merge field name. These pieces of text are displayed between brackets «» and with a gray background. To set a piece of text as merge field, select the text and call `AdvRichEditor.SetSelectionMergeField('MergeFieldName');`

Assume that following merge field names exist in the TAdvRichEditor document:

'Name'  
'Street'  
'City'  
'Country'



then a merge operation can be done in the following way:

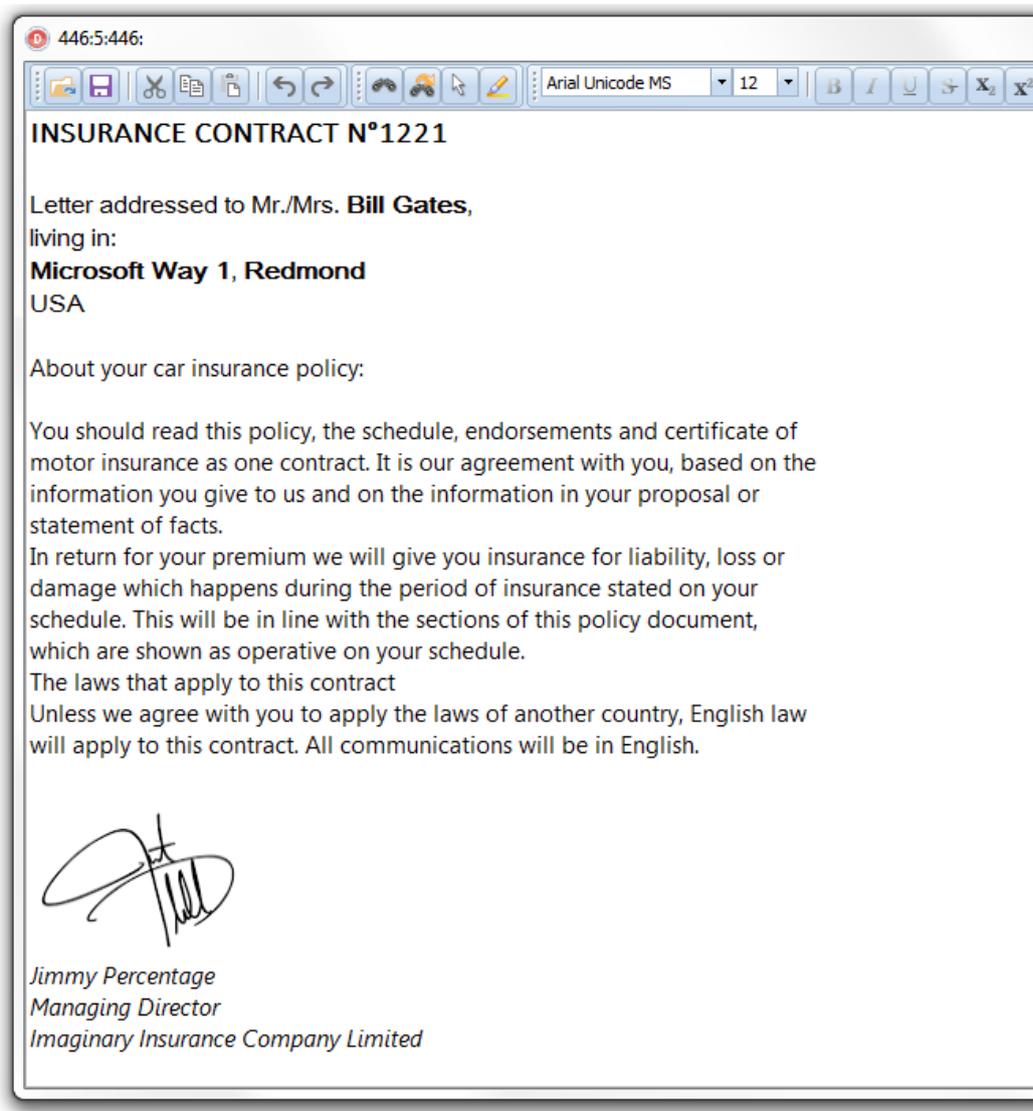
```
var
  sl: TStringList;
```

```
sl := TStringList.Create;
sl.Add('Name=Bill Gates');
sl.Add('Street=Microsoft Way 1');
sl.Add('City=Redmond');
sl.Add('Country=USA');

AdvRichEditor1.Merge(sl);

sl.Free;
```

This will replace the merge fields Name, Street, City, Country with the values 'Bill Gates', 'Microsoft Way 1', 'Redmond', 'USA' specifically.



It is also possible to replace merge fields by pictures, i.e. insert pictures dynamically during a merge operation.

To do this, set a merge fieldname just like for text but using following construct for the mergelist:

Assume that in the previous example we want to add a picture of the person in the document, this would become:

```
'Photo'  
'Name'  
'Street'  
'City'  
'Country'
```

A merge operation is be done in the following way:

```
var  
  sl: TStringList;  
  pic: TPicture;  
  
pic := TPicture.Create;  
try  
  pic.LoadFromFile('billgates.jpg');  
  
  sl := TStringList.Create;  
  try  
    sl.AddObject('Photo=',pic);  
    sl.Add('Name=Bill Gates');  
    sl.Add('Street=Microsoft Way 1');  
    sl.Add('City=Redmond');  
    sl.Add('Country=USA');  
  
    AdvRichEditor1.Merge(sl);  
  finally  
    sl.Free;  
  end;  
finally  
  pic.Free;  
end;
```

To undo the merge operation (and have the document ready for a new merge operation), simply call `AdvRichEditor1.UnMerge`; after the merge operation.

To retrieve the list of merge fields available in the richeditor content, the method `GetMergeFields()` can be use.

**Example:**

```
var  
  sl: TStringList;  
  
sl := TStringList.Create;  
try  
  AdvRichEditor1.GetMergeFields(sl);  
  // show the list of merge fields here  
finally  
  sl.Free;  
end;
```

## Using accompanying toolbars

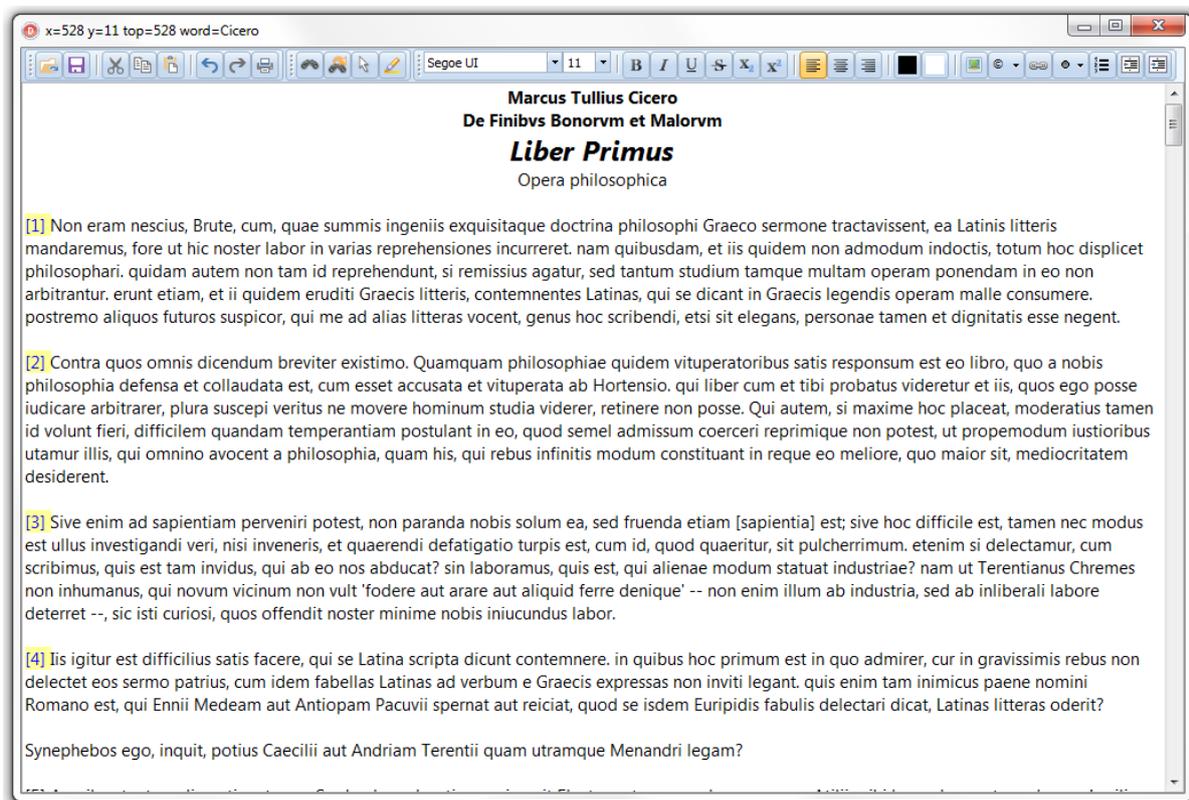
TAdvRichEditor comes with several ready-to-use toolbars that enable to quickly create user-interfaces for manipulating the formatted text without writing code.

The toolbars come in 3 categories:

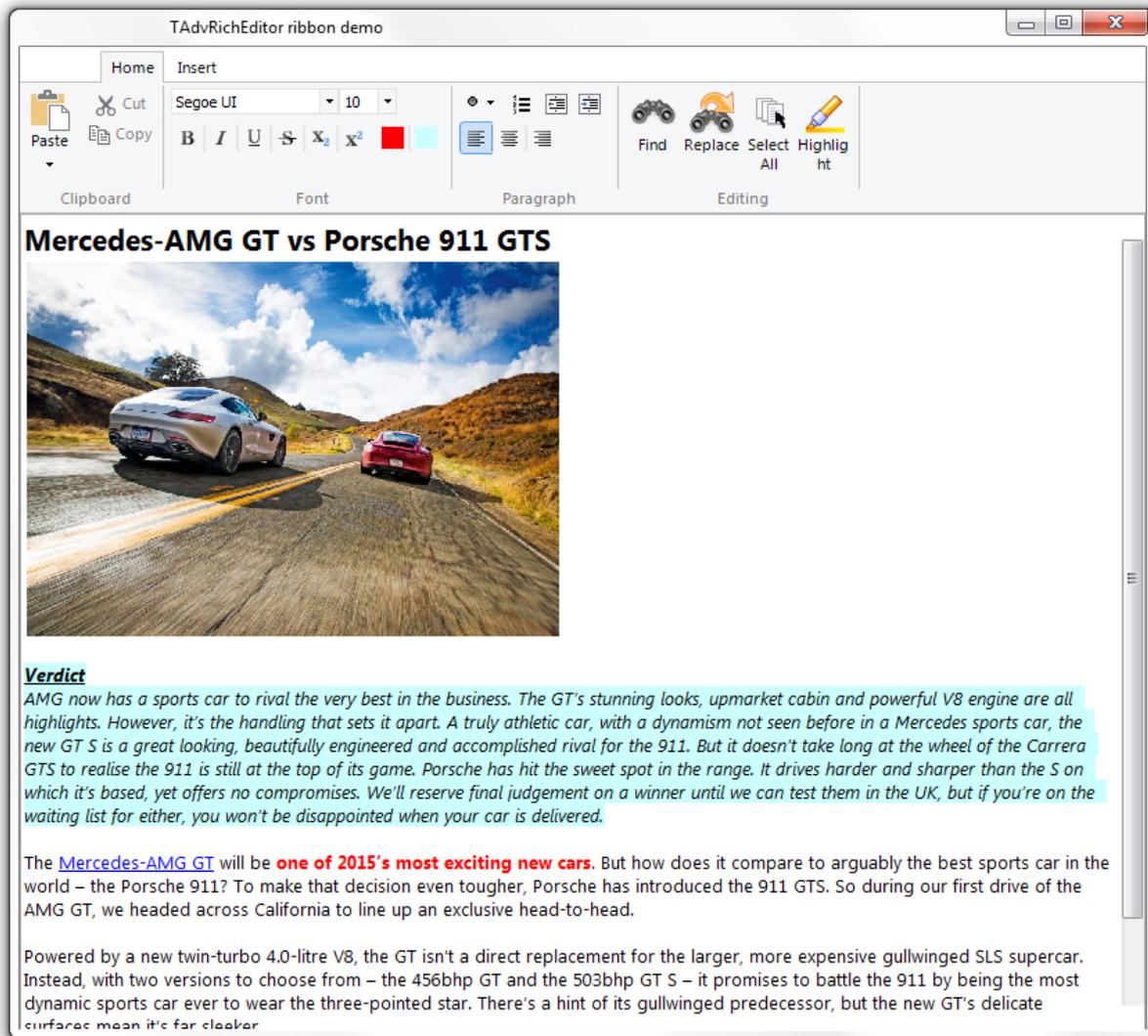
- Simple button bars that only rely on standard VCL controls
- A docking toolbar set that builds upon the docking toolbars found in TMS Advanced Toolbars & Menus (see <http://www.tmssoftware.com/site/advtoolbars.asp>)
- Ribbon toolbars that also build upon TMS Advanced Toolbars & Menus

The offered toolbars all make internally heavily use of actions to achieve their functionality. Some functions in the toolbars still need a reference to the TAdvRichEditor instance that is being worked with and therefore, it is needed to set `ToolBar.RichEditor` to the instance of this TAdvRichEditor.

Sample for a UI made with docking toolbars:



Sample for a UI made with ribbon:



To start using the toolbars, simply drop one of the needed buttonbar on the form or toolbars on either a TAdvDockPanel or TAdvOfficePage.

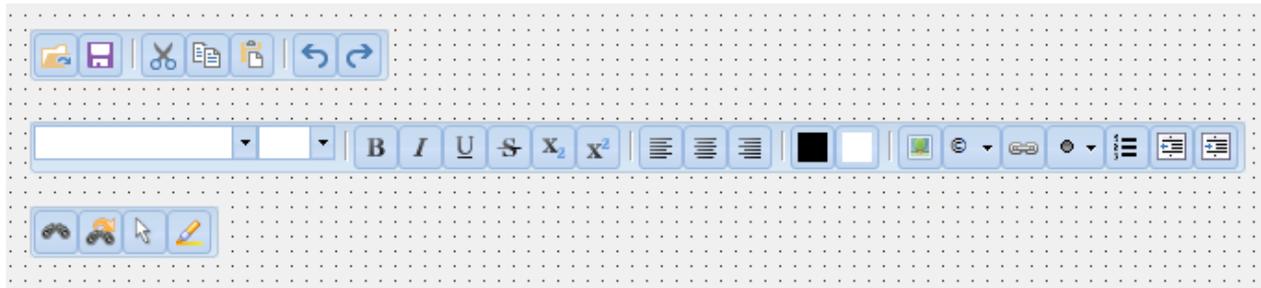
### TAdvRichEditorEditButtonBar, TAdvRichEditorFormatButtonBar

These are two button bars, built using standard VCL Panels & speedbuttons. The TAdvRichEditorEditButtonBar gives access to file open/save functions, clipboard functions and Undo/Redo. The TAdvRichEditorFormatButtonBar offers all control over font, colors, alignment, indenting, bullets as well as inserting images, hyperlinks and special characters.



## TAdvRichEditorEditToolBar, TAdvRichEditorFormatToolBar, TAdvRichEditorEditingToolBar

These are three toolbars designed to be used in combination with a TAdvDockPanel. The toolbars are divided in functions for Open/Save/Clipboard/Undo/Redo with the TAdvRichEditorEditToolBar, changing font characteristics, alignment, bullets, indents, colors and inserting images, hyperlinks, special characters with the TAdvRichEditorFormatToolBar and finally, Find & Replace, highlight and Select-All with the TAdvRichEditorEditingToolBar.



TAdvRichEditorClipboardRibbonToolBar, TAdvRichEditorFormatRibbonToolBar,  
TAdvRichEditorParagraphRibbonToolBar, TAdvRichEditorInsertRibbonToolBar,  
TAdvRichEditorEditingRibbonToolBar

For use with a ribbon user-interface, the different functions for the TAdvRichEditor were divided in 5 parts:

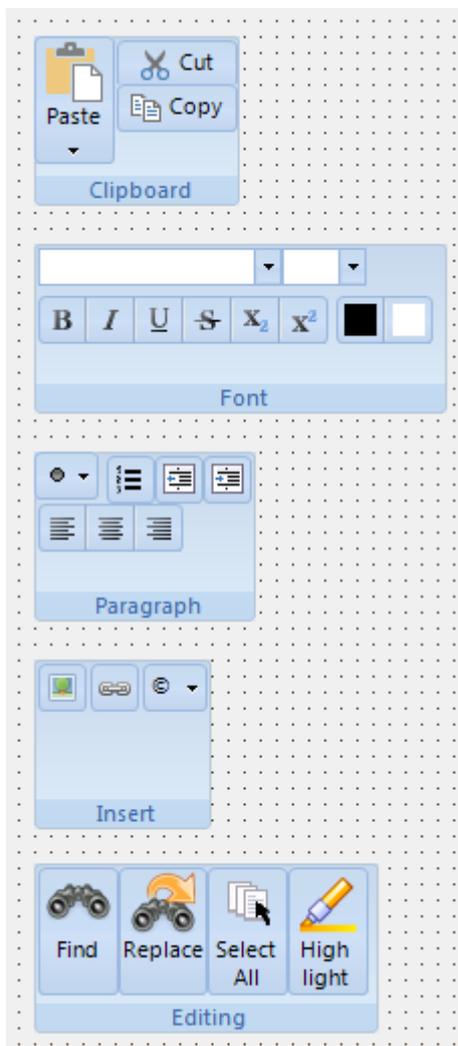
TAdvRichEditorClipboardRibbonToolBar: clipboard functions

TAdvRichEditorFormatRibbonToolBar: font formatting functions

TAdvRichEditorParagraphRibbonToolBar: alignment, indenting, bullet functions

TAdvRichEditorInsertRibbonToolBar: inserting images, hyperlink, special characters

TAdvRichEditorEditingRibbonToolBar: find & replace, select-all and highlight



## Importing & exporting in rich text

---

TAdvRichEditor comes with a component to allow to import or export its content in rich text (.RTF) files.

Performing such export or import is easy. Drop a TAdvRichEditorRTFIO component on the form and connect the TAdvRichEditor to this non-visual component's RichEditor property.

### *Export*

Simply call:

```
AdvRichEditorRTFIO.Save(FileName);
```

### *Import*

Simply call:

```
AdvRichEditorRTFIO.Load(FileName);
```

## Importing & exporting in HTML format

---

TAdvRichEditor comes with a component to allow to export its content in HTML (.HTML) files. It is also possible to import from files that use a HTML subset (mini HTML) described here:

<http://www.tmssoftware.com/site/minihtml.asp>

Performing such export or import is easy. Drop a TAdvRichEditorHTMLIO component on the form and connect the TAdvRichEditor to this non-visual component's RichEditor property.

### *Export*

Simply call:

```
AdvRichEditorHTMLIO.Save(FileName);
```

Notice that for HTML export, the default behaviour is that all images used in the document are exported as separate linked image files in the same folder where the .HTML file is generated. If it is preferred that images are generated in a different folder, use the 2<sup>nd</sup> default parameter ImagePath:

```
AdvRichEditorHTMLIO.Save(FileName, ImagePath);
```

### *Import*

This is limited to mini HTML files and import is done via the non-visual component TAdvRichEditorMiniHTMLIO. In the same way as TAdvRichEditorHTMLIO, assign the TAdvRichEditor instance via TAdvRichEditorMiniHTMLIO.RichEditor. The component provides the following overloads to import from HTML:

```
procedure Load(HtmlValue: string; const Images: TCustomImageList; const Pictures: TGDIPPictureContainer = nil); overload;  
procedure Load(FileName: string); overload;  
procedure Load(AStream: TStream); overload;
```

This way, it can import from a simple HTML formatted string, a file with HTML formatted text or a stream. In the case of loading from a HTML formatting string, 2 extra parameters Images & Pictures can be used as containers for referenced images in the HTML formatted string.

Finally, one more helper method is available in TAdvRichEditorMiniHTMLIO:

```
procedure Insert(HtmlValue: string);
```

This inserts the formatted text from a HTML formatted string at caret position in the TAdvRichEditor.

## Exporting to PDF

---

The TMS Component Pack also contains a component for exporting the TAdvRichEditor content to PDF file.

Drop a TAdvRichEditorPDFIO component on the form and connect the TAdvRichEditor to this non-visual component's RichEditor property.

Then simply call:

```
AdvRichEditorPDFIO.Save(FileName);
```

TAdvRichEditorPDFIO comes with settings for header and footer as well as metadata. Header and footer can as such be optionally generated for the PDF file independently from the TAdvRichEditor content.

## Import or export to mini-HTML

---

With the component TAdvRichEditor.MiniHTMLIO, it is possible to read or write the contents of the TAdvRichEditor in mini-HTML format. Mini-HTML is a subset of HTML and is described at:

<http://www.tmssoftware.com/site/minihtml.asp>

To use TAdvRichEditorMiniHTML to read or write its contents in HTML, drop TAdvRichEditorMiniHTML on the form and connect the TAdvRichEditor instance to TAdvRichEditorMiniHTMLIO.RichEditor.

Call TAdvRichEditorMiniHTMLIO.Load(FileName: string) to load the content from a HTML file.

Call TAdvRichEditorMiniHTMLIO.Save(FileName: string) to save the content to a HTML file.

In addition to saving to file, it is also possible to save to a stream or get the content as HTML:

TAdvRichEditorMiniHTMLIO.Save(AStream: TStream) : saves the content in HTML format to stream

TAdvRichEditorMiniHTMLIO.AsString: string : returns the content in HTML format as string

In addition to loading from file, it is also possible to get the content from a stream or a HTML formatted string:

TAdvRichEditorMiniHTMLIO.Load(AStream: TStream);

Loads the content from a stream containing the HTML formatted text.

TAdvRichEditorMiniHTMLIO.Load(HtmlValue: string; const Images: TCustomImageList; const Pictures: TPictureContainer = nil);

HTMLValue contains the content as HTML formatted string. Optionally, for passing pictures, an imagelist or picturecontainer can be used in case the HTML formatted string references pictures in an imagelist or picturecontainer.

## TAdvRichEditor actions

TAdvRichEditor also registered various actions that can be used to quickly hookup visual controls to perform actions on the TAdvRichEditor.

Currently following actions are registered and available from the action manager in the IDE:

|                                  |  |
|----------------------------------|--|
| TAdvRichEditorClear              | Clear document                               |
| TAdvRichEditorCut                | Cut selection to clipboard                   |
| TAdvRichEditorCopy               | Copy selection to clipboard                  |
| TAdvRichEditorPaste              | Paste text or image from clipboard           |
| TAdvRichEditorSelectAll          | Selects all text in document                 |
| TAdvRichEditorAlignRight         | Align paragraph right                        |
| TAdvRichEditorAlignCenter        | Align paragraph centered                     |
| TAdvRichEditorAlignLeft          | Align paragraph left                         |
| TAdvRichEditorBold               | Toggle bold font style on selection          |
| TAdvRichEditorItalic             | Toggle italic font style on selection        |
| TAdvRichEditorUnderline          | Toggle underline font style on selection     |
| TAdvRichEditorStrikeOut          | Toggle strikethrough font style on selection |
| TAdvRichEditorSubScript          | Toggle subscript font style on selection     |
| TAdvRichEditorSuperScript        | Toggle superscript font style on selection   |
| TAdvRichEditorTextColor          | Sets text color of selected text             |
| TAdvRichEditorFontName           | Sets font face name of selected text         |
| TAdvRichEditorFontSize           | Sets font size of selected text              |
| TAdvRichEditorBulletType         | Sets the bullet type of the selected text    |
| TAdvRichEditorNumberedBulletType | Sets numbered bullets on selected text       |
| TAdvRichEditorColor              | Sets background color on selected text       |
| TAdvRichEditorIndent             | Indent selected text                         |
| TAdvRichEditorUnIndent           | Unindent selected text                       |
| TAdvRichEditorUndo               | Perform Undo                                 |
| TAdvRichEditorRedo               | Perform Redo                                 |

## TDBAdvRichEditor

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TDBAdvRichEditor is a DB-aware version of TAdvRichEditor. It allows to connect the rich editor directly to a database that stores the content of the editor in a blob field.

To start using the TDBAdvRichEditor, drop a dataset on the form and connect it via a datasource to the TDBAdvRichEditor.DataSource property. Set the blob field where the content is stored via TDBAdvRichEditor.DataField.

In addition to enabling to hookup the content of the rich editor to a dataset, the TDBAdvRichEditor can also perform merging with another dataset. To do this, drop a merge dataset on the form and connect it via a datasource to TDBAdvRichEditor.MergeSource. When executing TDBAdvRichEditor.Merge, the rich editor will now try to find the value for the merge fields in the dataset.

Example:

When the merge dataset contains the DB fields:

NAME: VARCHAR(25)  
PRENAME: VARCHAR(25)  
CITY: VARCHAR(25)  
PICTURE: BLOB

then, on the position in the text where this DB field values should be inserted, add merge fields with the name set to the DB fieldname, i.e. use TDBAdvRichEditor.SetSelectionMergeField(DBFieldName) for each of the fields.

When TDBAdvRichEditor.Merge is now called, the field data (text / images) from the current record in the merge dataset will now be set at these positions in the rich editor.

## Spell check with TAdvRichEditor

Not available in the stand-alone TAdvRichEditor product but as part of the TMS Component Pack, it comes with a spell check engine and several UI components to perform spell check & auto-correct either while typing in the TAdvRichEditor or statically on the document.

To use spell check with TAdvRichEditor, simply drop the non-visual component TAdvRichEditorSpellCheck on the form and connect the TAdvRichEditor instance to TAdvRichEditorSpellCheck.RichEditor.

With the option TAdvRichEditorSpellCheck.SpellCheckAction, it can be controlled what action is performed during typing.

SpellCheckAction:

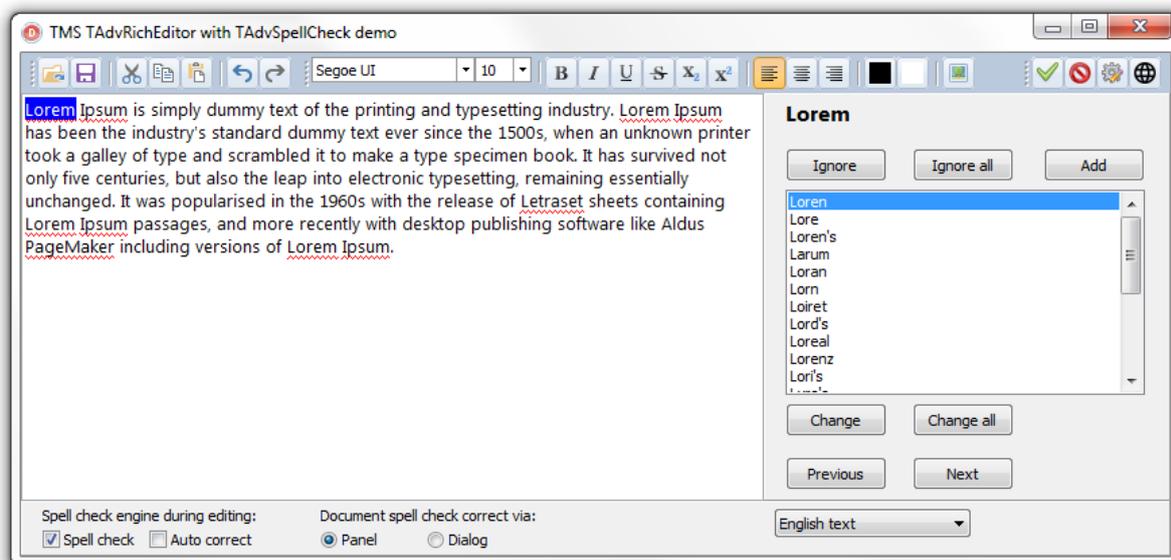
spcNone: while typing, no action is performed

spcMarkError: when a misspelled word is typed, it is marked with red underline

spcAutoCorrect: when a misspelled word is typed, it is automatically replaced by the first matching word

Other than performing a spell check while typing, it is possible to perform a spell check on the entire document.

The spell check on the entire document is initiated with TAdvRichEditorSpellCheck.CheckDocument:



This performs an asynchronous spell check of the document. When the spell check is finished, the event OnRequestsProcessed is triggered.

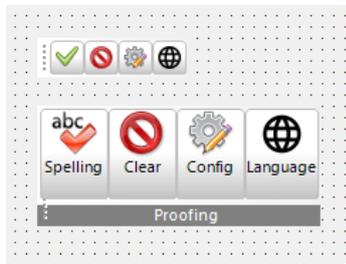
In addition to the core spell check engine for TAdvRichEditor, two additional user interface components are available: TAdvRichEditorSpellCheckDialog and TAdvRichEditorSpellCheckPanel. These components can be dropped on the form. Connect the spell check engine and TAdvRichEditor instance to the TAdvRichEditorSpellCheckPanel.SpellCheck and TAdvRichEditorSpellCheckPanel.RichEditor properties respectively. This allows to automatically interact with the correction of a spell-checked document without any code needed except the initialization when the spell check is complete. This is commonly done with:

```
procedure TForm1.AdvRichEditorSpellCheck1RequestsProcessed(Sender: TObject;  
  Context: TProcessRequestContext);  
begin  
  AdvRichEditor1.SelectError(esFirst);  
  AdvRichEditorSpellCheckPanel1.DoUpdate;  
end;
```

This code selects the first incorrect word in the TAdvRichEditor instance and then instructs the panel to initialize itself with the suggestions list for this first misspelled word.

## Built-in proofing docking toolbar and proofing ribbon toolbar

TAdvRichEditor also comes with ready-to-use docking & ribbon proofing toolbars:



The toolbar features four buttons:

- Perform spell check of the document
- Clear all marked spell check errors
- Configure the spell check engine
- Choose the language

Via the Options property, any of these toolbar buttons can be turned on or turned off.