

Draw images with text using DynaPDF

We have been using [GraphicsMagick](#) functions for years to draw some text, but we can do the same in DynaPDF. We draw text in a new PDF document and then render it as image without ever saving the PDF document. We can even use transparency and render the PDF with alpha channel and save as PNG image.

The award winning MBS Plugin is easily the most powerful plug-in available for Claris FileMaker today. There are over 7,700 functions that allow Claris FileMaker developers to extend their solutions in some amazing ways. Each function does a little task and in their combination you can unleash the full power of our plugin. MBS Plugin support Claris FileMaker Pro, Server (Scheduled Scripts, WebDirect Data API, & PSoS) and the iOS SDK. To learn how to use them together, please check our reference and our more than 600 example databases.

We support FileMaker 7 to the latest version 22.0. Please use MBS Plugin 15.2 or newer for FileMaker 22 alias 2025.

Our first example places some text on the PDF page using the [DynaPDF.WriteStyledTextEx](#) function. This function can take text with styles from a field in FileMaker (or variable) and draw it into the PDF. The styles are converted for DynaPDF's format commands. The text is wrapped to the desired width of 300 points and we use justify for alignment.

After the text is drawn, we use [DynaPDF.GetLastTextPosY](#) to query how big the text block is. Passing -1 as height for the text box allows us to have a variable height. This provides you the information on where to place another text or where to draw additional text. In our example we use the text position and the page height to calculate a new media box. This limits the visible part of the page to only the size of our text box.

Then we close the page and render the 1st page of the PDF document as an image. We pass the page number and the request resolution with 150 dpi. The default format is a RGB image stored as JPEG. In the script you can decide whether you like to save as PDF or render the image.

Here is the complete script except the DynaPDF initialization:

```
# Start with a new PDF document
Set Variable [ $pdf ; Value: MBS("DynaPDF.New") ]
# Add page
Set Variable [ $r ; Value: MBS("DynaPDF.AppendPage"; $pdf) ]
Set Variable [ $r ; Value: MBS("DynaPDF.SetPageCoords"; $pdf; "topdown") ]
Set Variable [ $r ; Value: MBS("DynaPDF.SetFont"; $pdf; "Helvetica"; 0; 12) ]
# Write some text
Set Variable [ $text ; Value: "The award winning MBS Plugin is easily the most powerful
plug-in available..." ]
Set Variable [ $r ; Value: MBS("DynaPDF.SetFillColor"; $pdf; 0; 0; 0) ]
Set Variable [ $r ; Value: MBS("DynaPDF.WriteStyledTextEx"; $pdf; 10; 10; 300; -1;
"justify"; $text) ]
# now figure out how much space we needed to make the page the right size
Set Variable [ $height ; Value: MBS("DynaPDF.GetLastTextPosY"; $pdf) ]
Set Variable [ $ph ; Value: MBS("DynaPDF.GetPageHeight"; $pdf) ]
Set Variable [ $r ; Value: MBS("DynaPDF.SetBBox"; $PDF; "Media"; 0; $ph; 320; $height -
10 ) ]
# close page, document and save PDF
Set Variable [ $r ; Value: MBS("DynaPDF.EndPage"; $pdf) ]
If [ 0 ]
    # save as PDF
    Set Variable [ $Result ; Value: MBS("DynaPDF.Save"; $pdf; "hello.pdf") ]
Else
    # or render a picture
    Set Variable [ $Result ; Value: MBS("DynaPDF.RenderPage"; $pdf; 1; 150) ]
End If
Set Variable [ $r ; Value: MBS("DynaPDF.Release"; $pdf) ]
# Put in Container
Set Field [ Create Text::PDF ; $Result ]
```

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Let's make a change and calculate the size upfront. This allows use to draw a round rectangle before we draw the text. For this we first convert the styled text to DynaPDF's format commands. Then we calculate the height of the text box with the desired width of 300 points.

Since we know the size of the textbox, we can change the page size to match what we need. We leave 10 points margin on all sides and define the page size accordingly. On that small page, we can draw the round rectangle with a 5 point margin. You usually don't draw something round directly on the edge of the paper. It doesn't look nice in the viewers later with anti-aliased drawing. Then we draw the text.

The new script looks like this:

```
# Start with a new PDF document
Set Variable [ $pdf ; Value: MBS("DynaPDF.New") ]
# Add page
Set Variable [ $r ; Value: MBS("DynaPDF.AppendPage"; $pdf) ]
Set Variable [ $r ; Value: MBS("DynaPDF.SetFont"; $pdf; "Helvetica"; 0; 12) ]
# Write some text
Set Variable [ $text ; Value: "The award winning MBS Plugin is easily the most powerful
plug-in available..." ]
Set Variable [ $ftext ; Value: MBS( "DynaPDF.ConvertStyledText"; $PDF; $Text) ]
# calculate height
Set Variable [ $width ; Value: 300 ]
Set Variable [ $height ; Value: MBS( "DynaPDF.GetFTextHeightEx"; $PDF; $width; "justify";
$ftext ) ]
# resize page
Set Variable [ $r ; Value: MBS( "DynaPDF.SetBBox"; $PDF; "Media"; 0; 0; $width + 20;
$height + 20 ) ]
Set Variable [ $r ; Value: MBS("DynaPDF.SetPageCoords"; $pdf; "topdown") ]
```

```

# draw round rect
Set Variable [ $r ; Value: MBS("DynaPDF.SetFillColor"; $pdf; 1; 1; 1) ]
Set Variable [ $r ; Value: MBS("DynaPDF.SetStrokeColor"; $pdf; 1; ,8; ,8) ]
Set Variable [ $r ; Value: MBS("DynaPDF.SetLineWidth"; $pdf; 3) ]
Set Variable [ $r ; Value: MBS( "DynaPDF.RoundRectEx"; $PDF; 5; 5; $width + 10;
$Height + 10; 10; 10; "FillStroke" ) ]
# and draw text
Set Variable [ $r ; Value: MBS("DynaPDF.SetFillColor"; $pdf; 0; 0; 0) ]
Set Variable [ $r ; Value: MBS("DynaPDF.WriteFTextEx"; $pdf; 10; 10; $width; -1; "justify";
$text) ]
# close page, document and save PDF
Set Variable [ $r ; Value: MBS("DynaPDF.EndPage"; $pdf) ]
If [ 0 ]
    # save as PDF
    Set Variable [ $Result ; Value: MBS("DynaPDF.Save"; $pdf; "hello.pdf") ]
Else
    # or render a picture, PNG with transparency
    Set Variable [ $Result ; Value: MBS("DynaPDF.RenderPage"; $pdf; 1; 150; 0; 0; "";
"RGBA"; "Flate"; "PNG"; "image.png") ]
End If
Set Variable [ $r ; Value: MBS("DynaPDF.Release"; $pdf) ]
# Put in Container
Set Field [ Create Text::PDF ; $Result ]

```

The sample scripts are included with the Create Text as PDFA.fmp12 example file for the next version.