

# mPDF



## New features in mPDF Version 5.1

This is a copy of Example 54, but all object colours are converted to grayscale using simply:

```
$mpdf->restrictColorSpace = 1;
```

- CSS background (images, colours or gradients) on <TR> and <TABLE>
- CSS border on <TR> (only in border-collapsed mode)
- support for Mozilla and CSS3 gradient syntax:
  - -moz-linear-gradient, linear-gradient
  - -moz-radial-gradient, radial-gradient
  - -moz-repeating-linear-gradient, linear-repeating-gradient
  - -moz-repeating-radial-gradient, radial-repeating-gradient
- expanded support for gradients (including in SVG images):
  - multiple colour 'stops'
  - opacity (transparency)
  - angle and/or position can be specified
- etc...

## Tables: borders, background images & gradients

Background images or gradients can be set on whole tables or table rows (as well as individual table cells)

|                                                        |                   |                         |
|--------------------------------------------------------|-------------------|-------------------------|
| Row 1                                                  | This is data      | This is data            |
| This row has a background-image of the bayeux tapestry |                   |                         |
| Row 3                                                  | This is long data | This is data            |
| This row has                                           | a gradient set    | which spans all 3 cells |
| Row 5                                                  | Also data         | Also data               |

Border can be set on table rows (only when border-collapse is set to collapse)

|       |                   |              |
|-------|-------------------|--------------|
| Row 1 | This is data      | This is data |
| Row 2 | This is data      | Also data    |
|       | This is data      |              |
|       | This is data      |              |
|       | This is data      |              |
| Row 3 | This is long data | This is data |

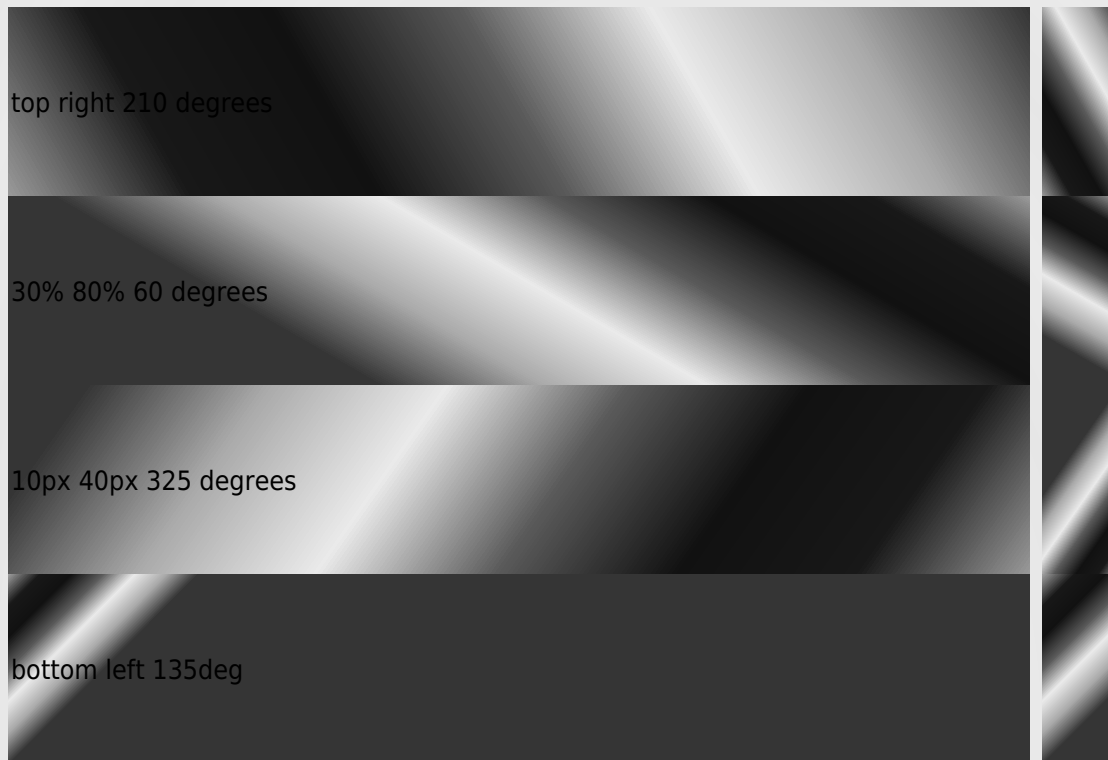
---

# Mozilla and CSS3 gradient syntax

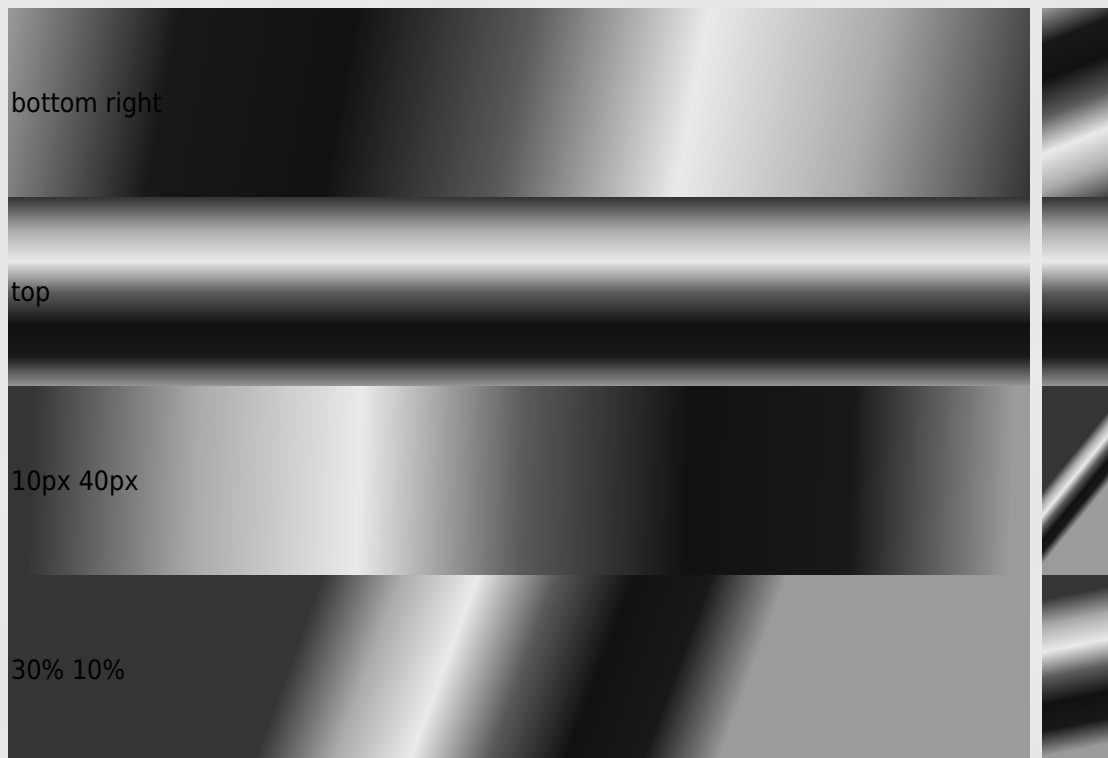
---

## Linear gradients

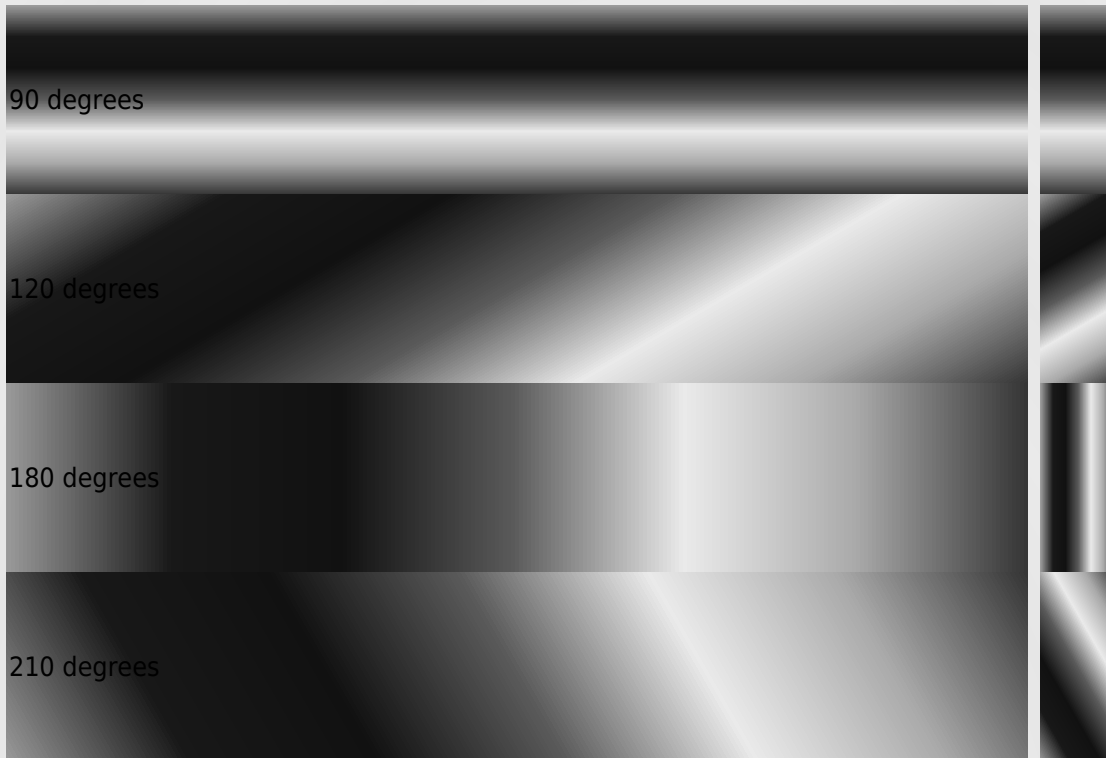
**ANGLE SET AND POINTS E.G. -MOZ-LINEAR-GRADIENT(34% 84% 30DEG, RED, ORANGE, YELLOW...**



**POINTS SET ONLY E.G. -MOZ-LINEAR-GRADIENT(BOTTOM LEFT, RED, ORANGE, YELLOW...**



## ANGLE SET BUT NO POINTS E.G. `-MOZ-LINEAR-GRADIENT(30DEG, RED, ORANGE, YELLOW...`



Linear and radial gradients are not specified in the CSS2 specification. The CSS3 draft specification gives a way of outputting gradients, but currently this is not supported by any browser.

Mozilla (Firefox) has developed its own way of producing gradients, which approximates to the CSS3 draft specification:

- `-moz-linear-gradient`
- `-moz-repeating-linear-gradient`
- `-moz-radial-gradient` and
- `-moz-repeating-radial-gradient`

WebKit (Safari, Chrome etc.) have a separate way of defining gradients using `-webkit-gradient`

Microsoft (IE) does not support any such method of specifying gradients, but does have a function `filter: progid:DXImageTransform.Microsoft.gradient()`

When writing HTML for cross-browser compatibility, it is common to see something like this in a stylesheet:

```
background: #999999; /* for non-css3 browsers */
filter: progid:DXImageTransform.Microsoft.gradient(startColorstr='#cccccc',
endColorstr='#000000'); /* for IE */
background: -webkit-gradient(linear, left top, left bottom, from(#cccccc),
to(#000000)); /* for webkit browsers */
background: -moz-linear-gradient(top, #cccccc, #000000); /* for firefox 3.6+
*/
```

mPDF versions  $\leq 5.0$  supported a custom style property `background-gradient` which accepted both linear and radial gradients. These continue to be supported (and both old and new forms can be used together); note the differences:

- mPDF background-gradients are output underneath background-images, and both can be specified; whereas the new CSS3/Mozilla-type gradients are defined as a type of background-image
- CSS3/Mozilla gradients support multiple colour-stops, opacity, repeating-gradients, and a greater number of options for defining the gradient axis (linear gradients) or shape and extent (radial gradients)

mPDF will attempt to parse a CSS stylesheet written for cross-browser compatibility:

- parse and support *-moz* type gradients
- parse and support CSS3 gradient syntax
- ignore *-webkit* syntax gradients

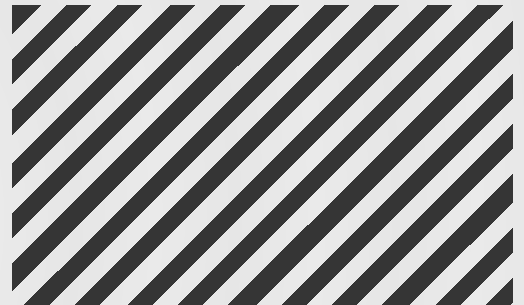
More details can be found at:

- Mozilla linear - <https://developer.mozilla.org/en/CSS/-moz-linear-gradient>
- Mozilla radial - <https://developer.mozilla.org/en/CSS/-moz-radial-gradient>
- Mozilla gradients use - [https://developer.mozilla.org/en/Using\\_gradients](https://developer.mozilla.org/en/Using_gradients)
- CSS3 linear gradients - <http://dev.w3.org/csswg/css3-images/#linear-gradients>
- CSS3 radial gradients - <http://dev.w3.org/csswg/css3-images/#radial-gradients>
- WebKit gradients - <http://webkit.org/blog/175/introducing-css-gradients/>

## Repeating gradients

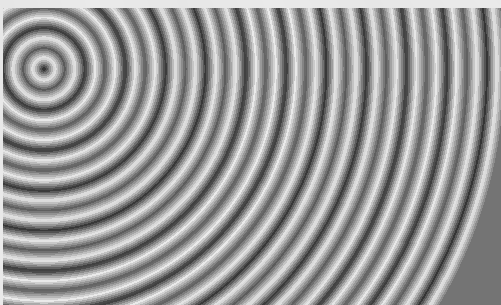
```
background: repeating-linear-gradient(red, blue 20px, red 40px);
```

```
background: -moz-repeating-linear-gradient(top left -45deg, red, red 10px,  
rgba(255,255,255,0) 10px, rgba(255,255,255,0) 20px);
```

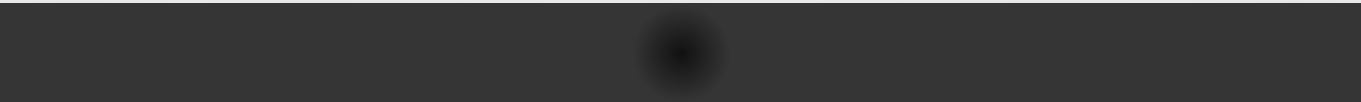
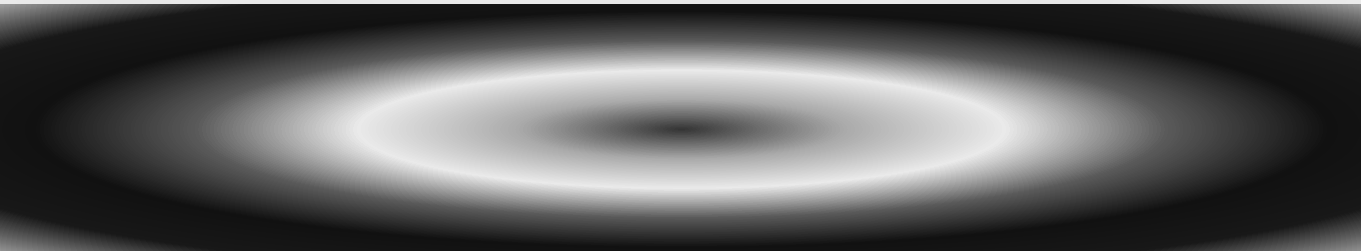
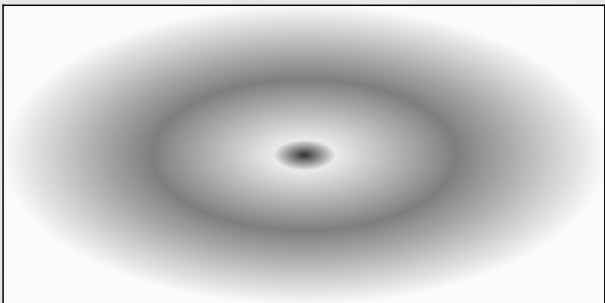
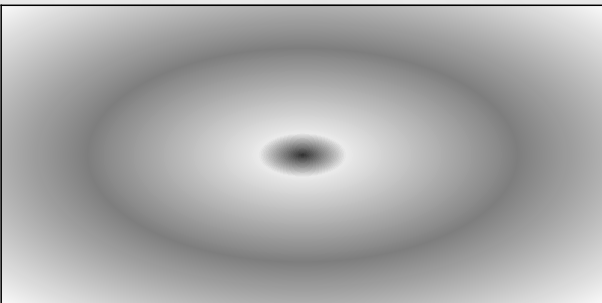
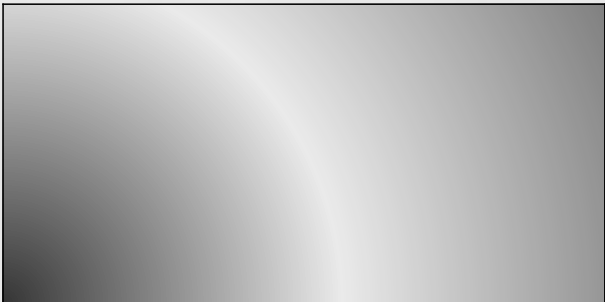
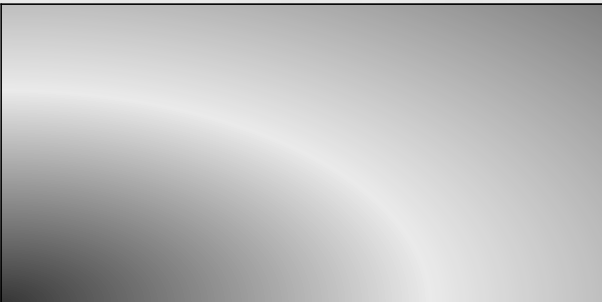
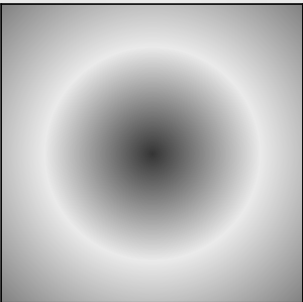
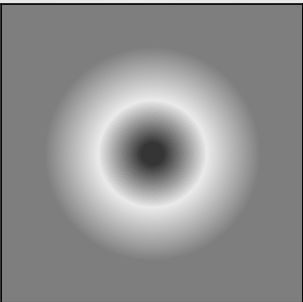
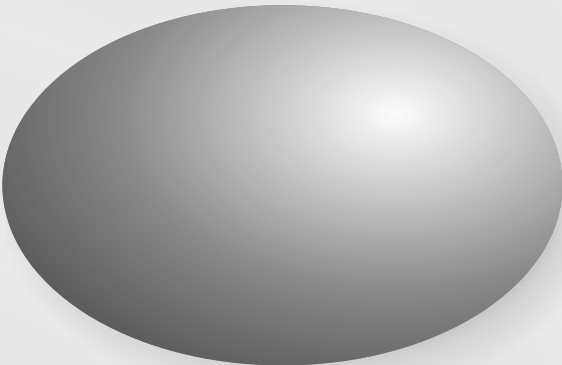
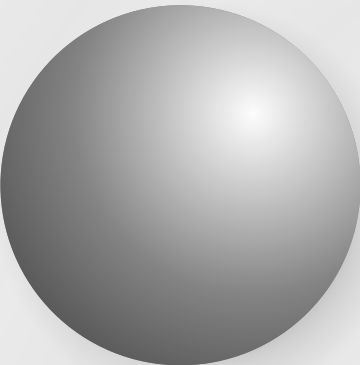


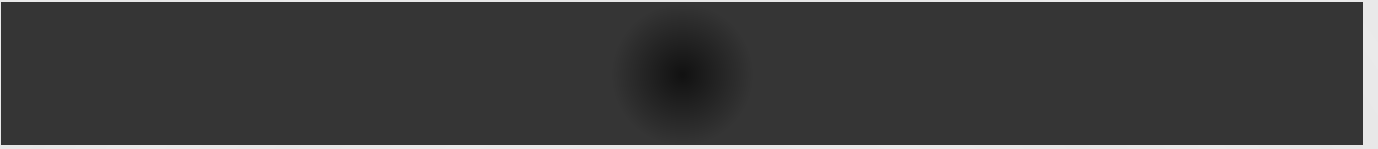
```
background: repeating-radial-gradient(20px 30px, circle farthest-side, red,  
yellow, green 10px, yellow 15px, red 20px);
```

```
background: repeating-radial-gradient(red, blue 20px, red 40px);
```



Radial gradients





# Gradient Image mask

Gradients (linear or radial) can also be used to produce 'masks' for images. The same syntax is used as for background gradients (e.g. `-moz-linear-gradient`) but is set using a custom mPDF style: *gradient-mask*. The `rgba()` method for defining colours is used: colours are ignored, but the opacity value is used to mask the image.

```

```

```

```

```

```

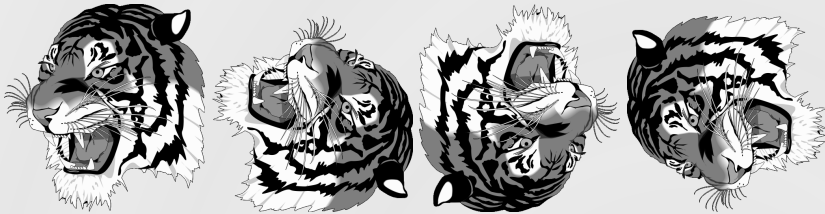


## Image orientation

Images can be rotated using a custom mPDF HTML attribute: rotate. mPDF now also supports the draft CSS3 property of image-orientation. Rotation can be expressed in degrees, radians or grad units; it is corrected if necessary to an orthogonal rotation i.e. 90, 180 or 270 degrees. NB This does not work on background-images.

```
  

```



## Image resolution

Image files (which do not have an output width or height specified) are displayed in mPDF at the default resolution set by the variable `$mpdf->img_dpi`. This can be overridden using the draft CSS3 property 'image-resolution', which can be applied to `<IMG>` or background-images.

The next 3 image files are identical (300px x 300px) but they have been saved with a different specified resolution: the first at 96dpi, the second at 300dpi.

NB When used in combination with 'from-image', a specified resolution is only used if the image does not have an intrinsic resolution. Only JPG, PNG and BMP files store a specified DPI resolution in the file.

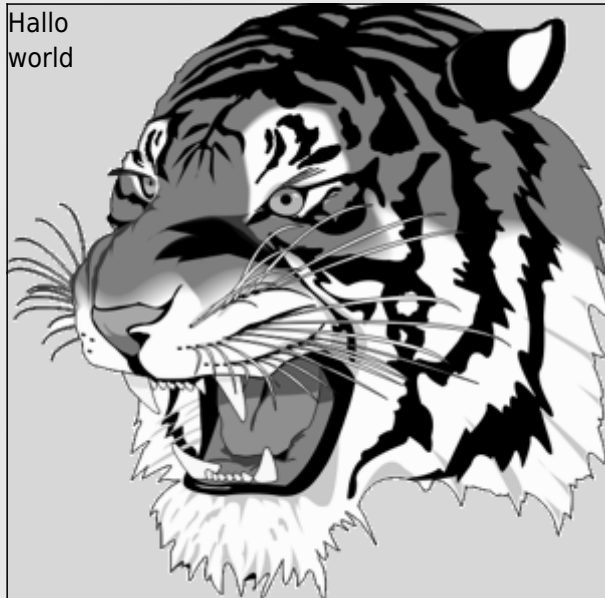
```
  
  

```

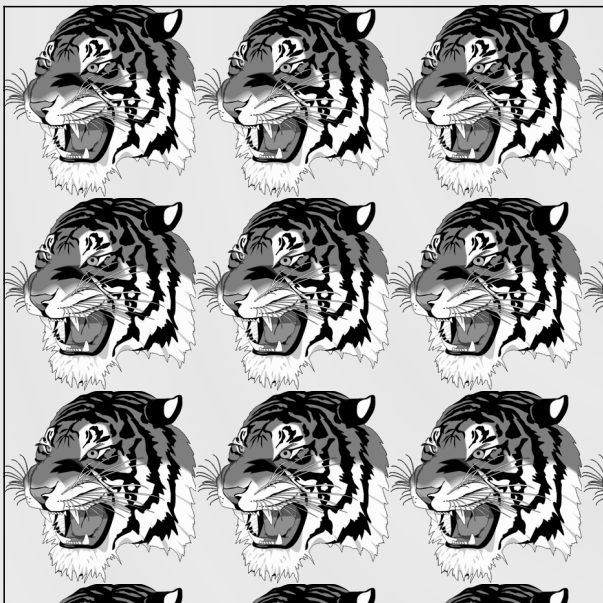


Image resolution can also be applied to a background-image. This can be used as an alternative to the custom mPDF style property - 'background-image-resize'

```
<div height="300px" width="300px" style="background: #FFCCEE  
url(tiger300px96dpi.png); background-image-resolution: from-image; border: 0.2mm  
solid black;">
```



```
<div height="300px" width="300px" style="background-image:  
url(tiger300px300dpi.png); background-image-resolution: from-image; border:  
0.2mm solid black;">
```



# Mixed effects

