

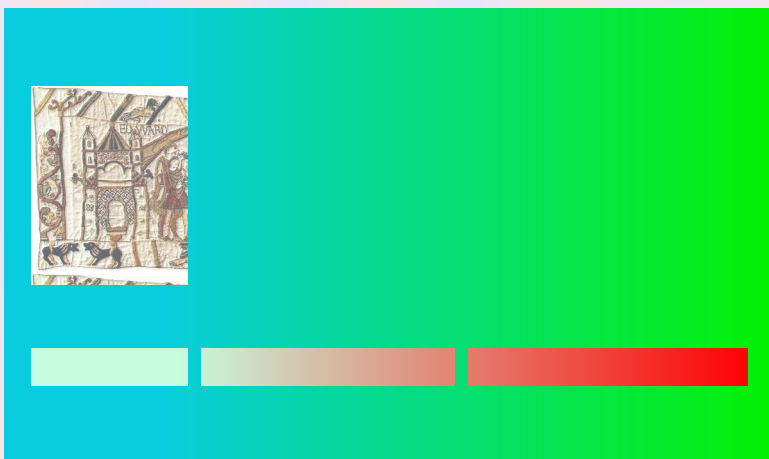
mPDF

New features in mPDF Version 5.1

- 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
- gradient can be used as an image mask (custom mPDF styles: gradient-mask)
- CSS3 image-orientation supported for (similar to existing custom mPDF attribute: rotate)
- CSS3 image-resolution supported for
- background-image-resolution (custom mPDF CSS-type style) to define resolution of background images
- improved support for SVG images
- SVG and WMF images supported in background-image
- file attachments (embedded in PDF file) → → → → →

Tables: borders, background images & gradients

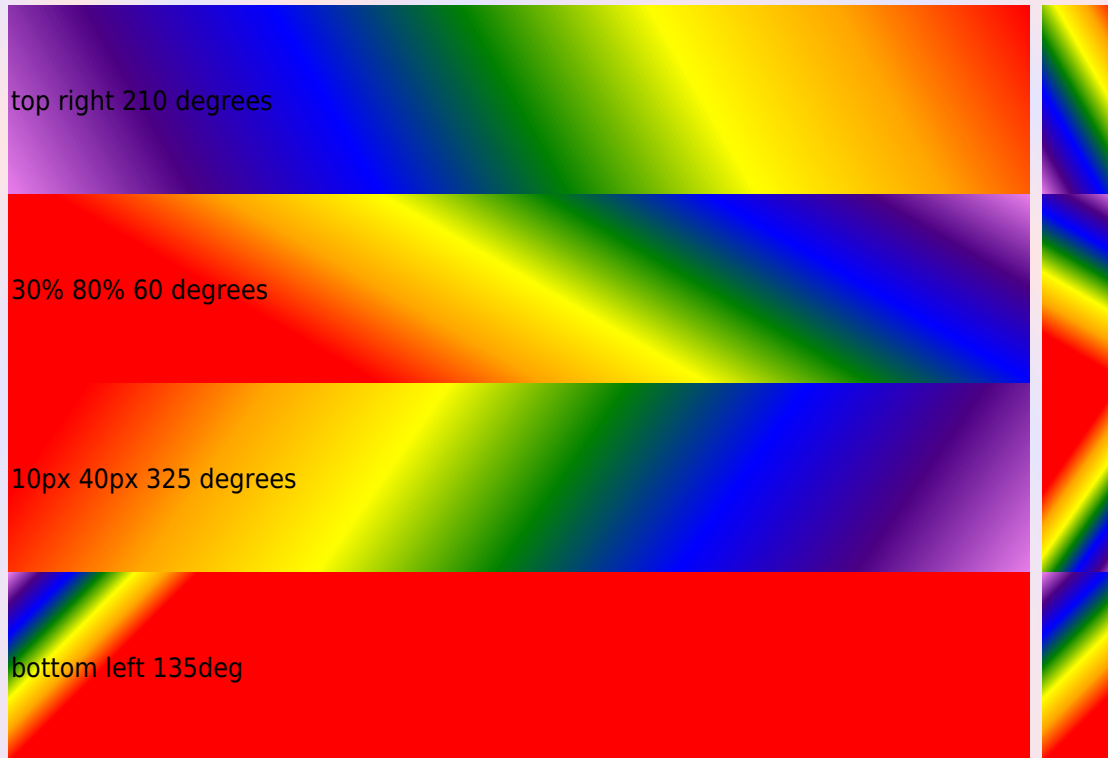
Background images or gradients can be set on whole tables or table rows (as well as individual table cells)



Mozilla and CSS3 gradient syntax

Linear gradients

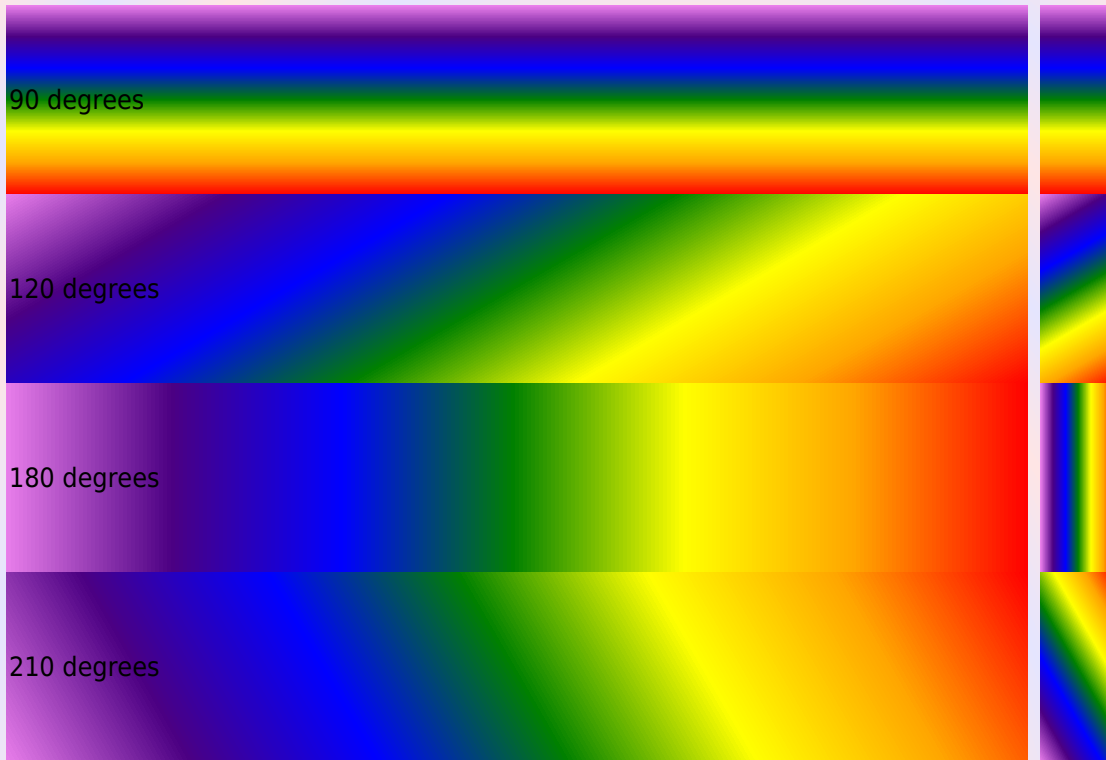
Angle set AND points e.g. `-moz-linear-gradient(34% 84% 30deg, red, orange, yellow...`



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 ≤ 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

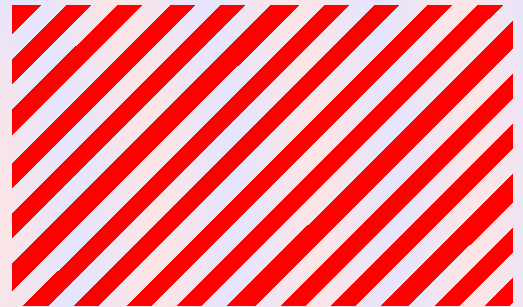
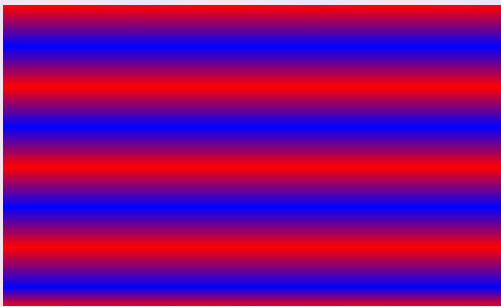
More details can be found at:

- 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
- 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

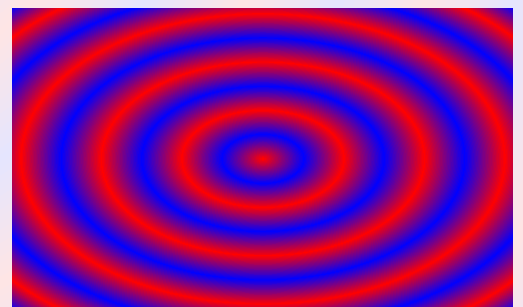
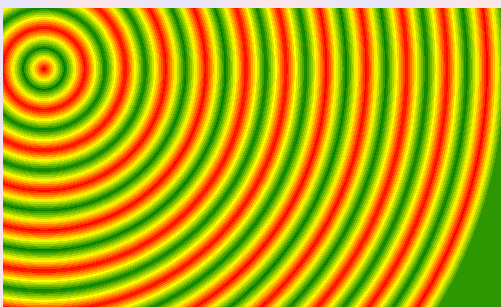
```
background: repeating-linear-gradient(red, blue 20px, red 40px);
```

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

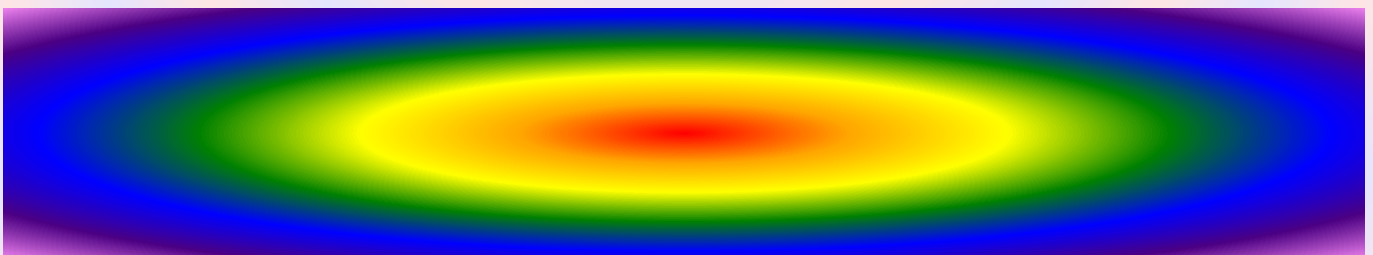
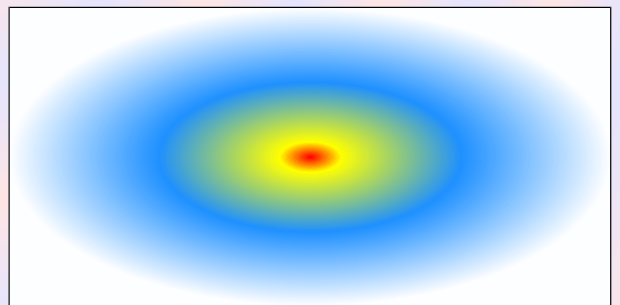
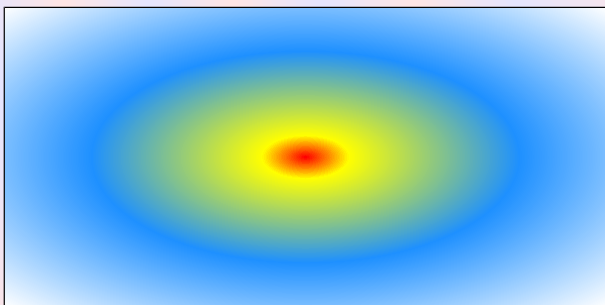
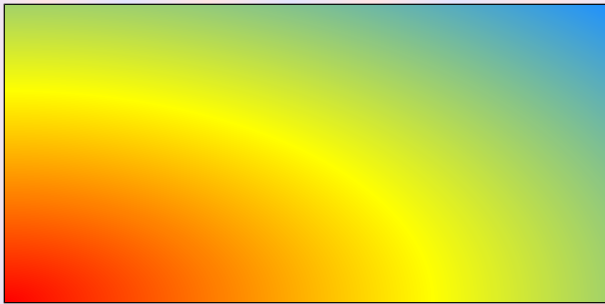
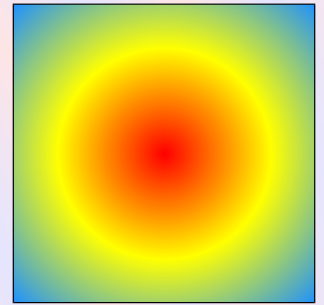
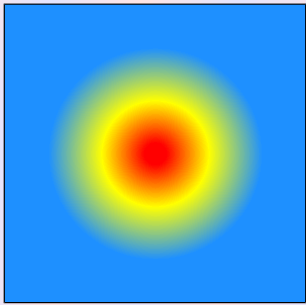
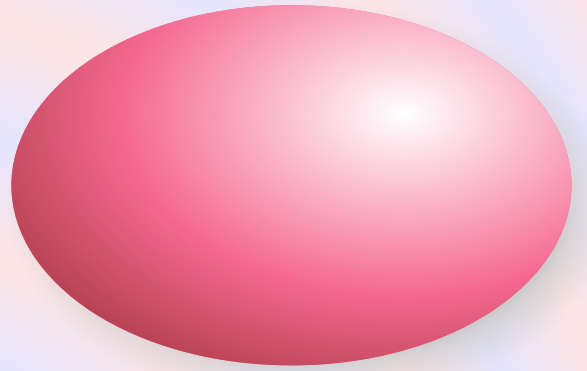
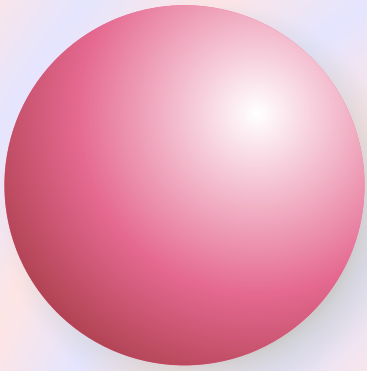


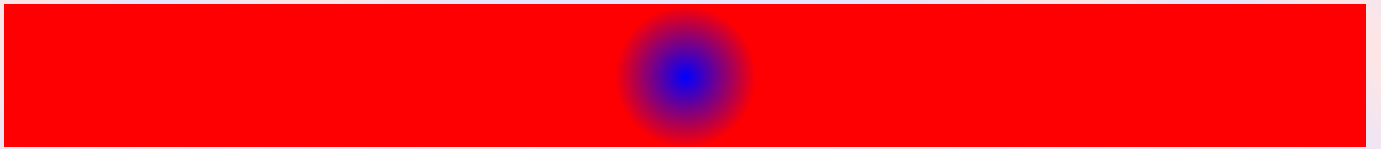
```
background: repeating-radial-gradient(20px 30px, circle farthest-side, red, yellow, green 10px, yellow 15px, red 20px);
```

```
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 `` 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

