

# The mwe Package

Martin Scharrer  
[martin@scharrer-online.de](mailto:martin@scharrer-online.de)

CTAN: <http://www.ctan.org/pkg/mwe>

VC: [https://bitbucket.org/martin\\_scharrer/mwe](https://bitbucket.org/martin_scharrer/mwe)

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## Abstract

The `mwe` CTAN package comes with a small  $\LaTeX$  package which loads packages commonly used to create minimal working examples (MWEs) and with a collection of dummy images. The idea is that this images are installed in the  $\TeX$ MF tree in a way where they are accessible by any document. Then MWEs with images can be shared by multiple users without the need of image replacement code or the `dummy` option of `graphicx`.

## 1 Introduction and Motivation

$\LaTeX$  has a large online-community and people can find a lot of help from other users on places like [comp.text.tex](http://comp.text.tex) or <http://tex.stackexchange.com/>. In many cases the user with the problem is required to post a code example which shows the use-case, but nothing unrelated, and should be compilable by other people without extra effort. Such an example is often called a *minimal working example* (MWE), or sometimes only *minimal example*. Users can use this example document to test if the issue also occurs in their  $\LaTeX$  installation and easily implement and test solutions. If a solution is found the modified example can be posted back to the original user. For general questions like ‘How to do X’, answers often create an example document by themselves.

There are some packages which are very useful for MWEs (and mostly only for these), like the `lipsum` and `blindtext` packages. Both produce dummy text in the document which is required to produce realistic scenarios for e.g. float placement etc. This frees the user from typing or copying larger dummy texts by himself, which would also increase the size of the example and make it less readable. The `mwe` package loads such packages and allows for a further reduction of the MWE document size.

A problem with sharing MWEs appears if image files are included in the document (e.g. `\includegraphics`, figure environments etc.). Often the image is replaced with a replacement code like `\rule{<width>}{<height>}` or the `demo` option of `graphicx` is used to replace the image with an empty frame without trying to read the given image file. Both of these methods are a little cumbersome and have other issues. For once, an explanation for new users must be added to replace the code with a real `\includegraphics` or to remove the `demo` option for their final document. Another issue might arise when the example requires specific image options like

scaling or cropping, which might not be easily and completely be replicated with these replacements. Also, the compiled result will look less than a normal document with real images.

To overcome these drawbacks several real dummy images with different sizes, ratios and formats are provided with this package. Once installed in the correct directory in the TEXMF tree they will be available to all documents. This way a user can compile any MWE given to him by another person which uses these image files without requiring code replacements or sharing images. The `mwe`, which loads `graphicx`, can be used to minimise the preamble, but is not required to be loaded in order to use the images.

It should be noted that the main contribution of this CTAN package is, at least at the moment, the provided demo/test image files. The `mwe`  $\LaTeX$  package is (in his current form) just an addition.

## 2 Usage

The provided image files can be included as normal using i.e. using the `graphicx` package and its `\includegraphics` [*options*] {*filename*} macro. They are also provided in source code form (.tex files) and can be included in a document using `\input`{*filename*}. They require the `tikz` package to be loaded. For this to work it is important that the images are located at the indented position in the TEXMF tree as described in section 3.

The `mwe` can be loaded in the preamble of a MWE and loads often used packages. At this moment these are only `graphicx`, `lipsum` and `blindtext`, while the last two are only loaded if they are installed. The package is not required for using the image files. If the package is loaded it will change the graphic extension list so that PDF files are used first for formats which support PDF images. Also `\graphicspath`{*example-*} is used to allow to shorten the file names to 'image..' instead of the full 'example-image...'.  
 Some MWE might even be better off not to use the package if specific side-effect between packages is tested.

### Usage Example

```
\documentclass{article}
\usepackage{mwe}% or load 'graphicx' and 'blindtext' manually
\begin{document}
\blindtext
\begin{figure}
\includegraphics[width=.48\linewidth]{example-image-a}\hfill
\includegraphics[width=.48\linewidth]{example-image-b}
\caption{MWE to demonstrate how to place to images side-by-side}
\end{figure}
\blindtext
\end{document}
```

### 3 Installation

The `mwe` package has due to its nature a little uncommon installation requirements. While the normal package files are installed as normal, a variety of image files are installed in the `tex/latex/mwe/` folder, so that they can be accessed from every (MWE) document.

Multiple binary images are included which can't be build from the DTX alone without extra conversion tools. A TDS ZIP file which only needs to be unzipped over the TEXMF is also provided. This is the preferred way to install this package for end users and distribution maintainers. If a manual build is wanted change all occurrences of 'nostandalone' to 'standalone' in the DTX file. Compile all extracted TEX files with `pdflatex` and convert these files from PDF to PNG and JPG. Compile again with `latex` and `dvips` to create the EPS files (rename the PS to EPS).

Files	TEXMF Installation folder
<code>mwe.dtx</code> <code>mwe.ins</code>	<code>source/latex/mwe/</code>
<code>mwe.pdf</code> <code>README</code> <code>INSTALL</code>	<code>doc/latex/mwe/</code>
<code>mwe.sty</code>	<code>tex/latex/mwe/</code>
<code>example-image-*.tex</code> , <code>example-image-*.pdf</code> , <code>example-image-*.png</code> , <code>example-image-*.jpg</code> , <code>example-image-*.eps</code>	<code>tex/latex/mwe/</code>
<code>example-image-*.tex</code> , <code>example-image-*.pdf</code> , <code>example-image-*.png</code> , <code>example-image-*.jpg</code> , <code>example-image-*.eps</code>	<code>tex/latex/mwe/</code>
<code>example-image-golden*.tex</code> , <code>example-image-golden*.pdf</code> , <code>example-image-golden*.png</code> , <code>example-image-golden*.jpg</code> , <code>example-image-golden*.eps</code>	<code>tex/latex/mwe/</code>
<code>example-grid-*.tex</code> , <code>example-grid-*.pdf</code>	<code>tex/latex/mwe/</code>
<code>example-image-a?*.pdf</code> <code>example-image-letter?*.pdf</code>	<code>tex/latex/mwe/</code>
<code>example-image-a?*.tex</code> <code>example-image-letter?*.tex</code>	<code>source/latex/mwe/</code>

### 4 Provided Images

The following images are provided by `mwe`. If the `mwe`  $\LaTeX$  package is loaded the PDF version will be used instead of the PNG version and the 'example-' part of the filename may be skipped.

#### 4.1 Normal Images

The following images are meant as dummy replacements for real images. They are provided as PDF, JPG, PNG and EPS formats in order to cover every possible use-case. They are also provides as TEX files holding the source code. The `tikz` package must be loaded in order to use them in a document. These source files originally use the `standalone` class and a preamble, but these lines have been commented out, in order to not require the `standalone` package in order to `\input` them into a MWE or test document.

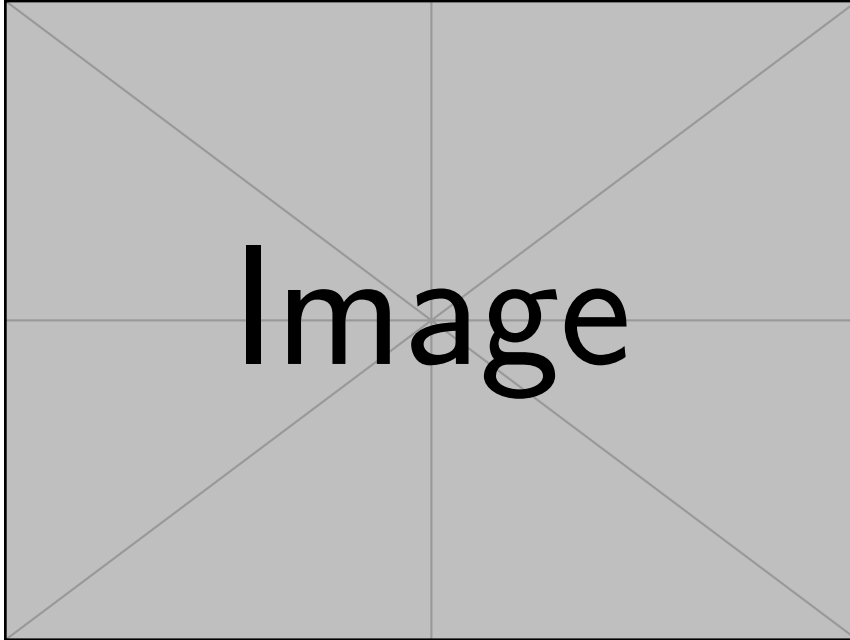


Figure 1: Image 'example-image' (PDF, also available as JPG, PNG and EPS).

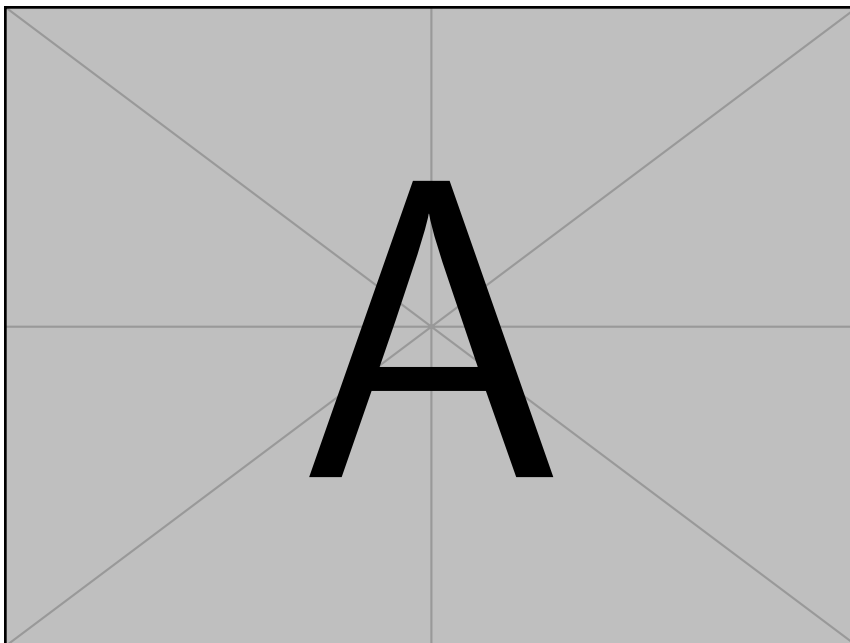


Figure 2: Image 'example-image-a' (PDF, also available as JPG, PNG and EPS).

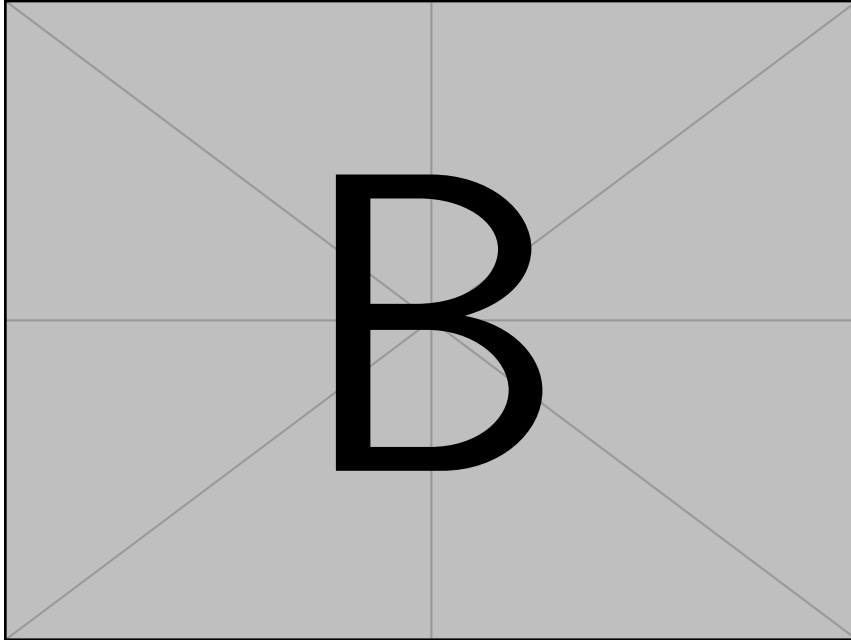


Figure 3: Image ‘example-image-b’ (PDF, also available as JPG, PNG and EPS).

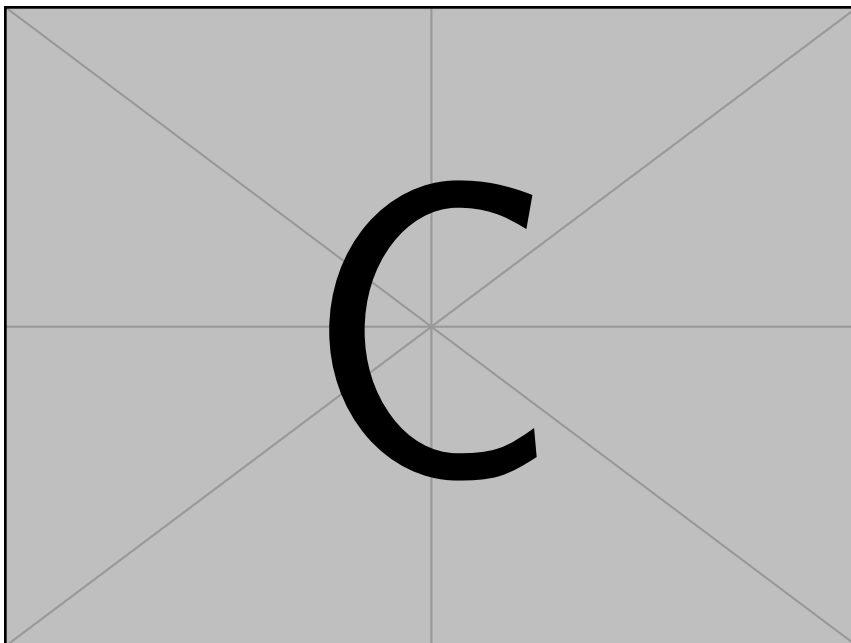


Figure 4: Image ‘example-image-c’ (PDF, also available as JPG, PNG and EPS).

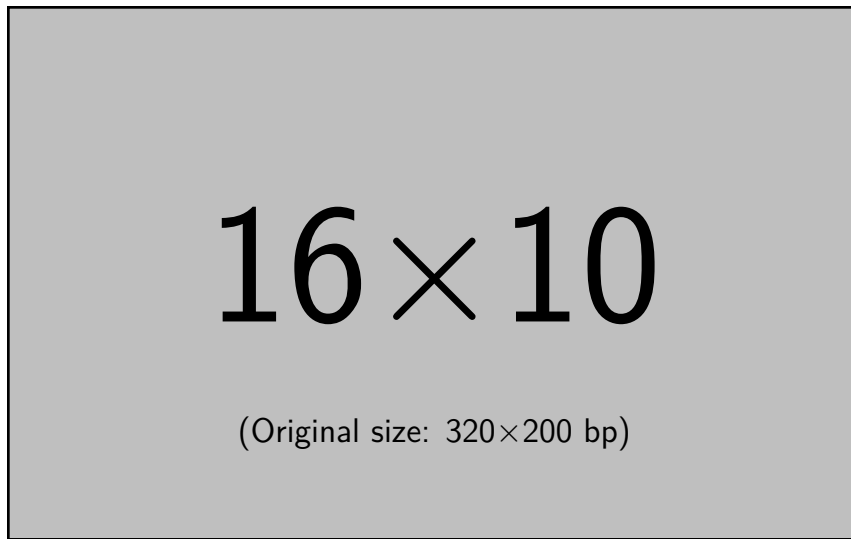


Figure 5: Image 'example-image-16x10' (PDF, also available as JPG, PNG and EPS).

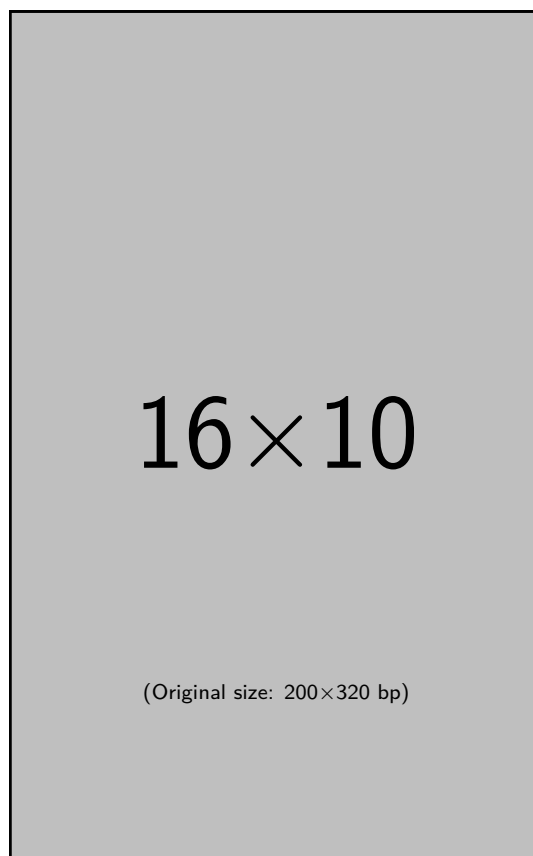


Figure 6: Image 'example-image-10x16' (PDF, also available as JPG, PNG and EPS).

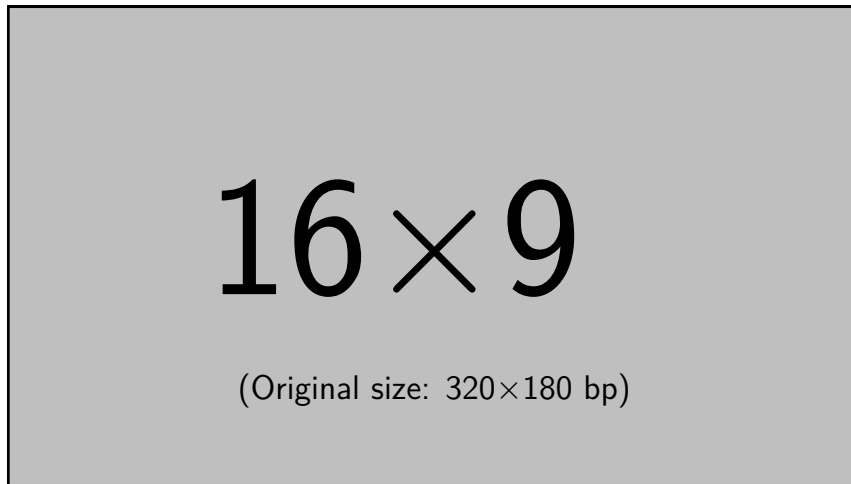


Figure 7: Image 'example-image-16x9' (PDF, also available as JPG, PNG and EPS).

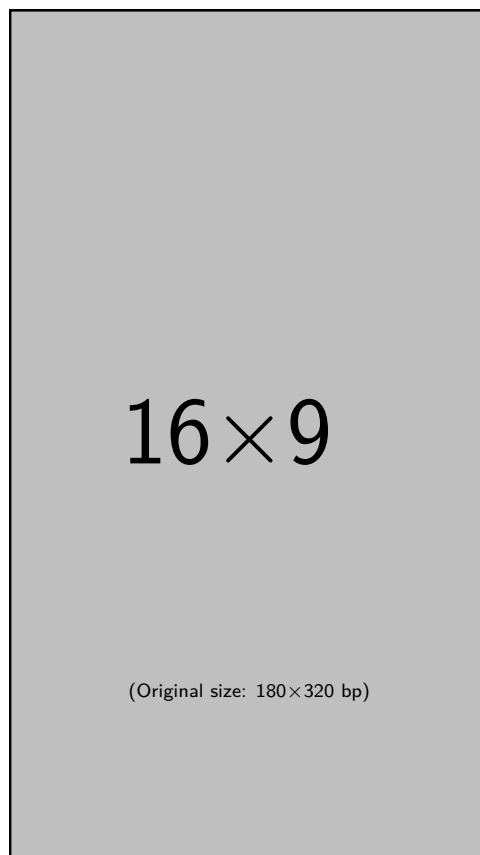


Figure 8: Image 'example-image-9x16' (PDF, also available as JPG, PNG and EPS).

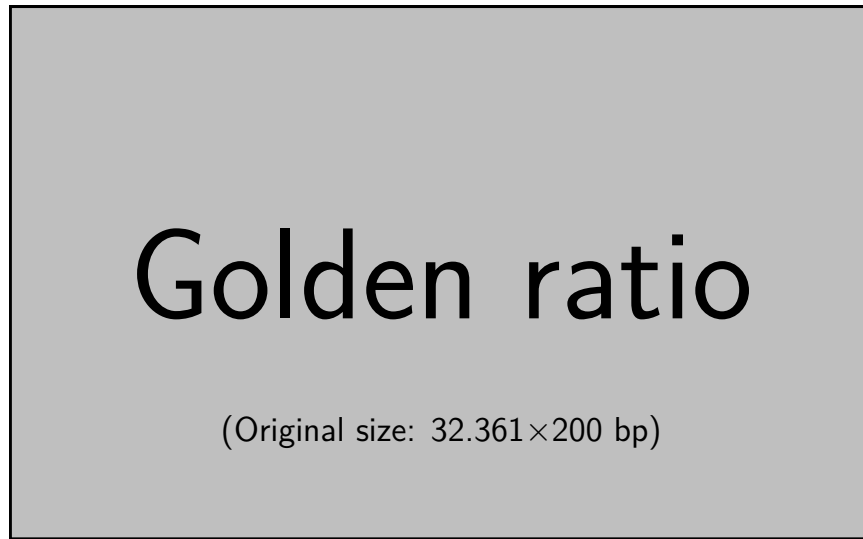


Figure 9: Image 'example-image-golden' (PDF, also available as JPG, PNG and EPS).

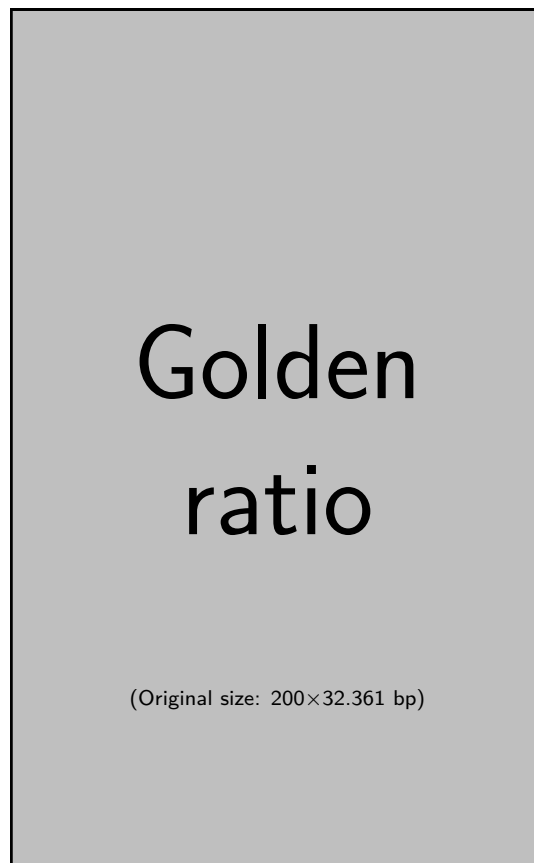


Figure 10: Image 'example-image-golden-upright' (PDF, also available as JPG, PNG and EPS).



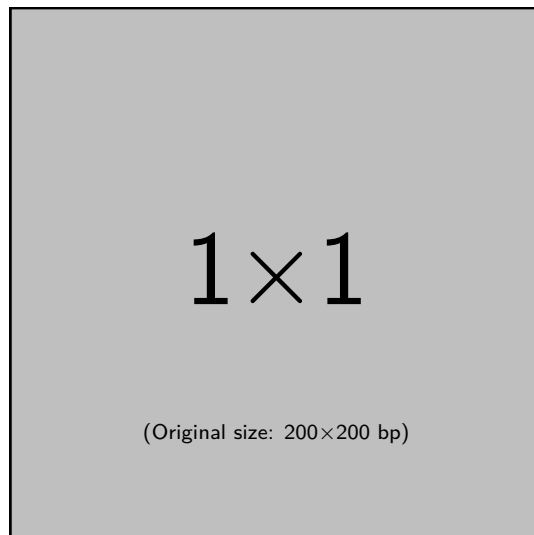


Figure 11: Image 'example-image-1x1' (PDF, also available as JPG, PNG and EPS).

## 4.2 Page-size images

The following files are PDFs in a specific page size like A4, letter, etc. They are provided for use cases where whole PDF pages are included. Because these images are large they are scaled down in order to be displayed in this manual.

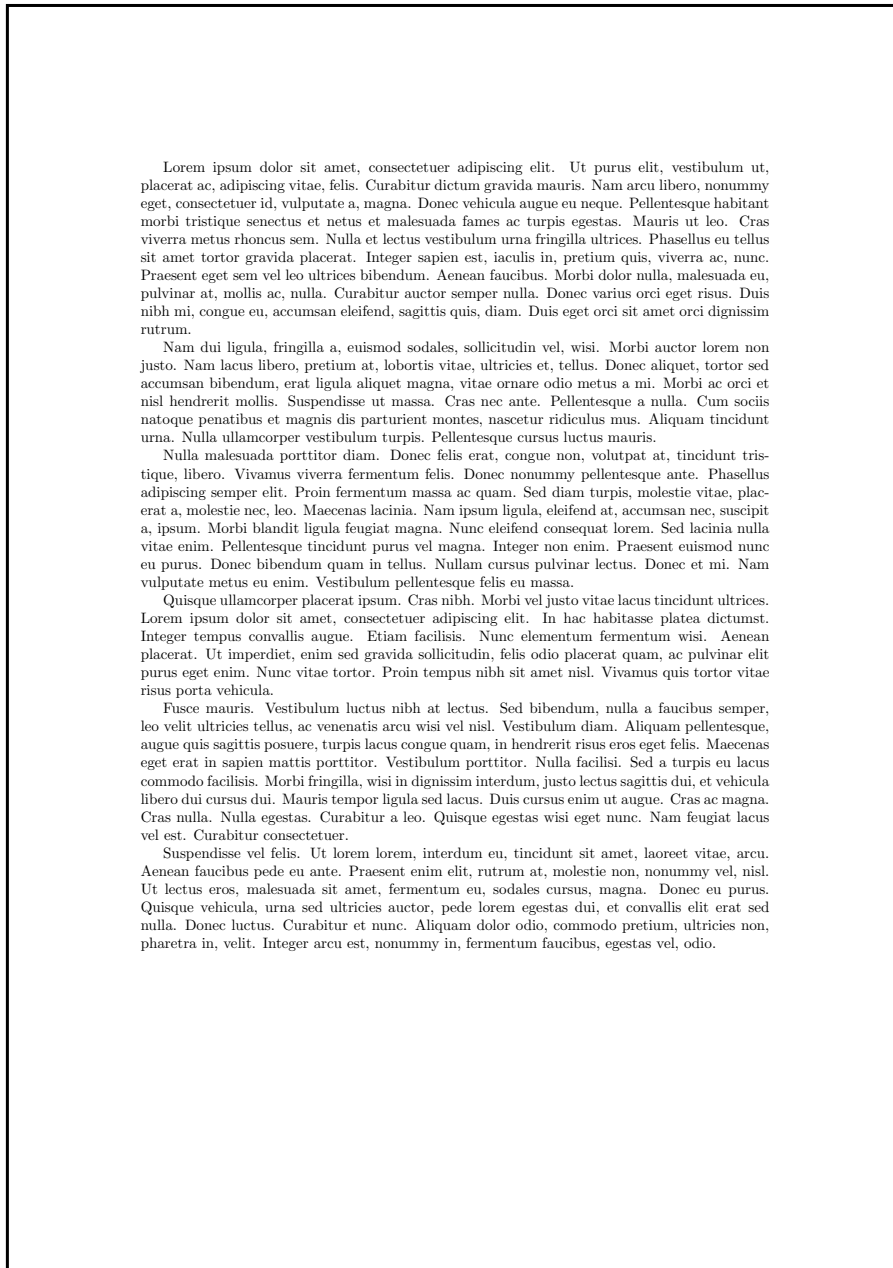


Figure 12: Image ‘example-image-a4’ (PDF scaled down).



Figure 13: Image ‘example-image-a4-landscape’ (PDF, scaled down).

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Figure 14: Image ‘example-image-a3’ (PDF, scaled down).

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Figure 15: Image ‘example-image-a3-landscape’ (PDF, scaled down).

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Figure 16: Image ‘example-image-a5’ (PDF scaled down).

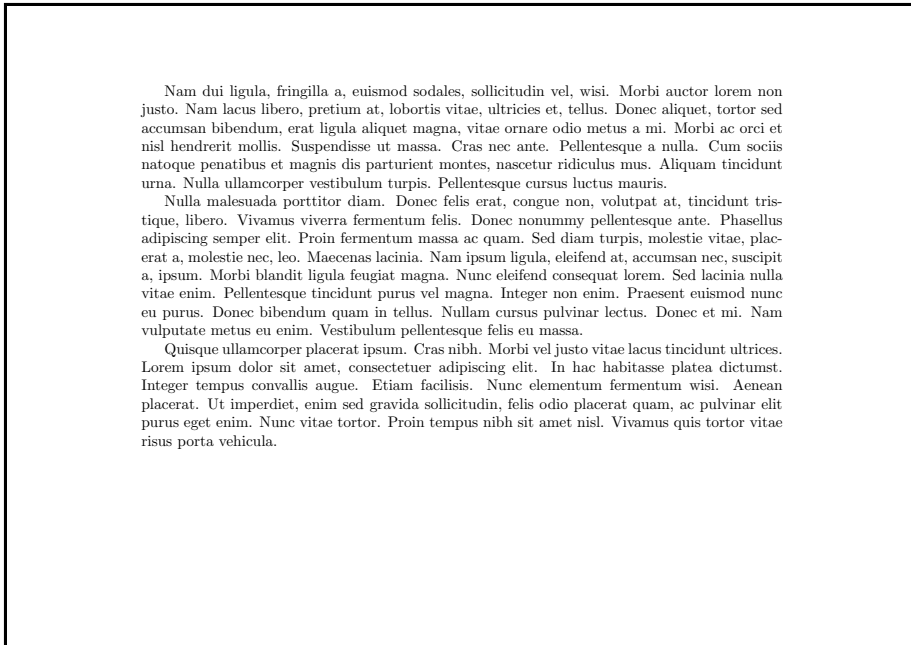


Figure 17: Image ‘example-image-a5-landscape’ (PDF, scaled down).

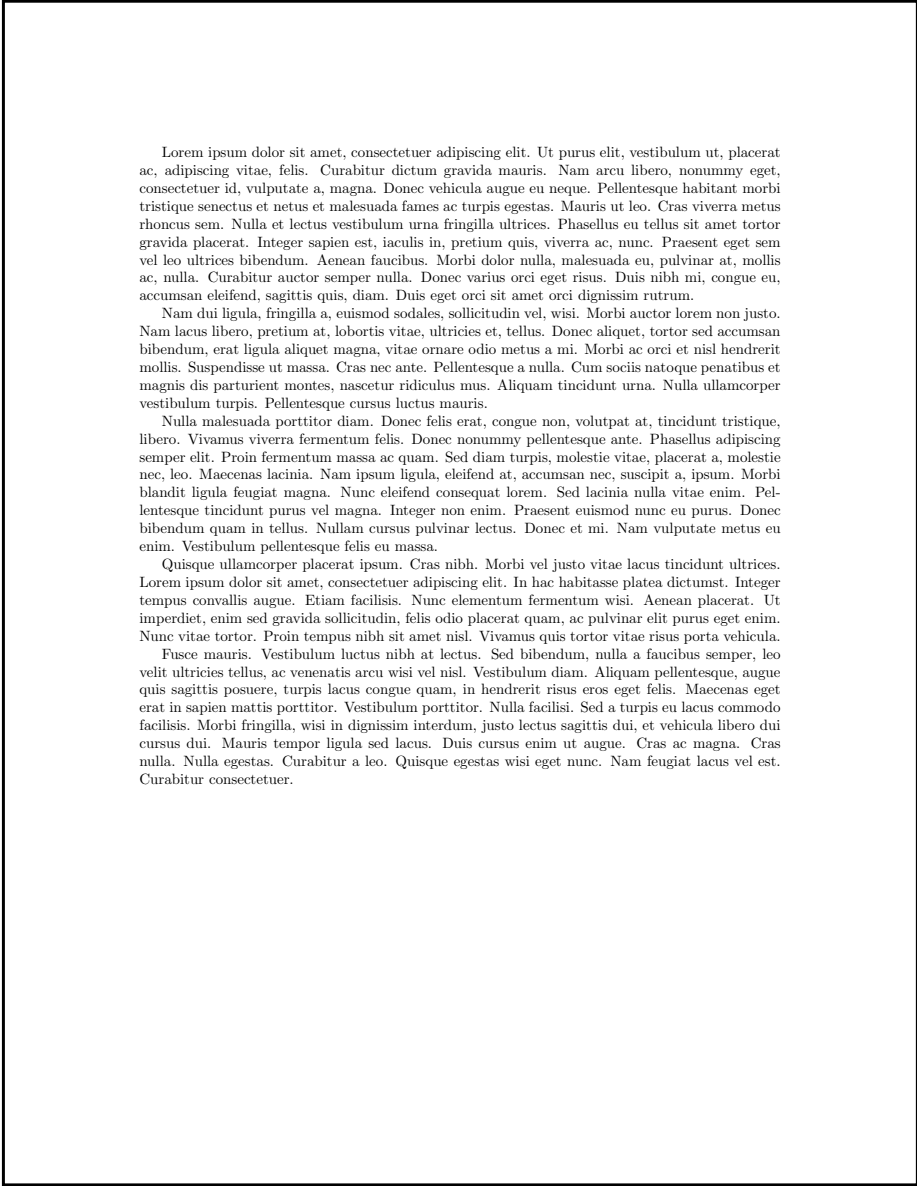


Figure 18: Image ‘example-image-letter’ (PDF, scaled down).



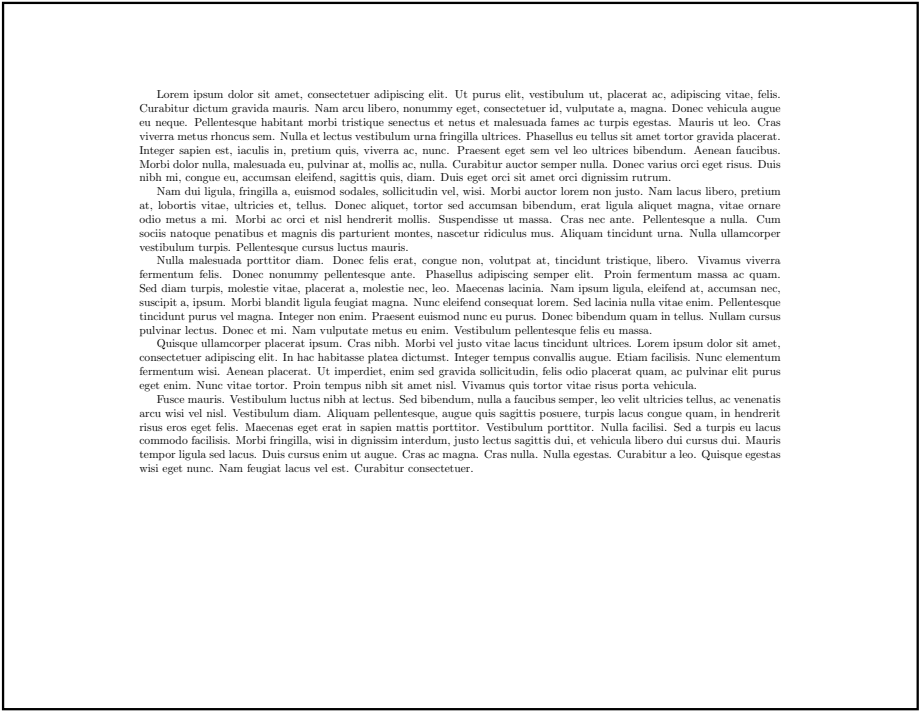


Figure 19: Image ‘example-image-letter-landscape’ (PDF, scaled down).

### 4.3 Numbered pages

Colored 12-pages A4 size document. Can be used with the pages key of `\includegraphics`:  
`example-image-a4-numbered` (pages scaled down)



Colored 12-pages letter size document: example-image-letter-numbered (pages scaled down)



## 4.4 Test images

The following images are intended for demonstrations of some image manipulation features. Their grid nature will make cropping effects very visible. These images are provided with sizes both in TeX points (1pt=1/72.27in) and PostScript/PDF points (1pt=1/72in). The pt version will produce more exact results if inserted in source form in a  $\LaTeX$  document, while the bp version results in nice integer PDF sizes. The difference is not meaningful for normal MWEs but can be significant if these files are used to demonstrate scaling features.

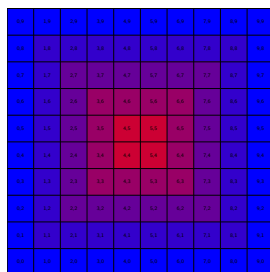


Figure 20: Image ‘example-grid-100x100bp’ (PDF, also available as JPG, PNG, EPS).

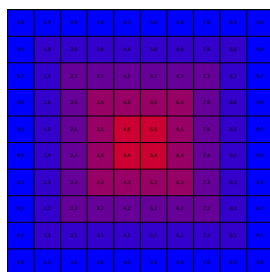


Figure 21: Image ‘example-grid-100x100pt’ (PDF, also available as JPG, PNG, EPS).