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Graphic Design, Typesetting, Picture Research, Pre-Press & Print

Preparing material for print layout Common problems and practical solutions

Image use

Permission for use

The first question to consider when gathering images together to use in a publication is – *do you have the right to use them?*

A common approach nowadays is to search and download images found online. Just because they are online though it does not mean one has the permission to re-produce them. The cost can be immense. Not only is the publisher liable but the designer and printer can also be liable for reproduction of images without permission and/or correct credits.

If you are unsure whether you can use an image, please double-check with the designer/layout person

Good design teams will have an extensive library of stock images that they can supply – for which they have the rights to use. Please make sure you are using a professional though – not somebody who is getting images without permission themselves and for which you will also be liable for use of such, including online use of such.

They should also be able to suggest sites where one can find images – where the photographer has given permission for free use (usually for non-profit organisations) and (relatively...) cheap online stock photo sites. A professional will also be able to source images for you if budgets allow.

You should note that stock photography has its limitations – being aimed at generic categories rather than at the very specific images our customers sometimes require.

Having said that – stock photography is a very useful option on a budget. Kavita Graphics has bought in many complete libraries of stock photography for use on our customers material. It will save customers in terms of both cost and look.

Image size and resolution

The second question to consider when gathering images together to use in a publication – *is the image large enough to reproduce?*

There are two elements to image size – firstly the actual physical size (height plus width and the resulting physical size of the file) and, secondly the resolution (the 'dots per inch' – dpi). This can be confusing because an image can appear to be of a relatively good quality when viewed on one's computer screen but will still not be big enough to print.

There is a practical technical reason for this. Images are often prepared for online and computer use and, therefore, are low-resolution (72 dpi is the usual size). The aim of this is to reduce the physical size of the file making it easier/quicker to send via email and/or to appear on a screen when online). An image only needs to be 72 dpi for online use because computer screens themselves use this low resolution. Press-printing is a completely different 'kettle of fish'. It uses a very high quality resolution. Images for press-printing should be 300 dpi to reproduce accurately. One can re-size an image to ensure the resulting image is 300 dpi but an increase in the resolution must be compensated for by a proportional reduction in the physical size of the image.

An example to make this concept clearer: If the designer/layout person is supplied with an image that is 12 cm wide and 72 dpi in resolution they can re-size the image to 300 dpi without a problem as long as they reduce the physical size proportionally – that is to (roughly...) one-third of its original physical size – so the resulting print-quality image is now only 4 cm wide.

One can get away with a little bit of cheating – 'forcing' an image to be larger but the smaller the original image – the less opportunity there is to increase the size of that image without loss of quality. Simply increasing the size of an image before sending this to the layout person is a big mistake though. It is strongly recommended that one leaves this task to people with the specialist software and experience to carry out the task appropriately.

In summary, sending very small images is hopeless for quality print reproduction.

How can you tell the sizes of an image? On both a PC or a Mac one can view the image file's 'properties' – this will tell you both the resolution and the physical size, usually as a 'pixel' size (pixels are a unit of measurement for online use 100 px = around 25 mm approx).

You can use this accurate unit converter: *http://www.unitconversion.org/typography/ pixels-x-to-millimeters-conversion.html*

A simpler approach – one that will give a reasonable ballpark figure – is to look at physical size of the image file – how big the resulting image file actually is. This size is given in the 'properties' – in either kilobytes (kb) or megabytes (mb) (if larger). A jpeg format image that is only 150-200 kb is very unlikely to be reproducible at any print size larger than 30-40 mm in total, an image that is over an mb in size, say 1.2 mb is probably reproducible at 100 mm. This is a rough approach that does not take into account all factors – but a good enough one for general use. Other issues – such as the image colour spectrum are also best left to the designer/layout person.

If one is looking at accurately reproducing high quality art images then this a slightly different matter and we would strongly recommend that you discuss the size, format and style of the images with the designer/ layout person before these images are sourced and supplied. In such instances the colour spectrum being used for the images becomes even more important as well.

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Image formats

The final image question to consider when gathering images together to use in a publication – *what image format?*

There are many image formats and this can be very confusing. The image format can be found by looking at the three (or, occasionally four...) letter tag at the end of a file name.

Most people will be familiar with the common 'jpeg' format (the file ending is ".jpg" or ".jpeg"). This is fine to send to the designer/layout person. Jpeg's are a compressed photo image format – good for reducing the physical size of a file when sending as an email attachment. One limitation is that each time one opens and saves such an image the compression setting further reduces the quality of that image.

Gif format files (".gif") tend to be low-resolution files for online use – these are often poor quality for print use.

Tif or Tiff format files (".tif" or ".tiff") tend to be higher-resolution print quality images. They are perfect for print use but tend to be very large files.

For images that tend to use flat areas of precise colour (as opposed to photographic images) – such as logos – it is always preferable to supply such images in an eps vector graphic format (".eps").

This is often a source of confusion because, when asked for logos, you will often be supplied with low-resolution gif or jpeg versions of a logo by individuals who are, understandably, not aware that these are intended only for online use.

Eps (vector format) files should not be opened to view before sending in inappropriate software (even photoshop) – this can destroy the resizable vector quality of the file. Eps vectors should be supplied with all type converted to outline shapes. They should also be supplied in a cmyk colour spectrum format.

Vector graphics can be resized without loss of quality (they are drawn graphics as opposed to dot/pixel based images). They can also be used over backgrounds without a white square appearing behind the logo (if properly designed!)

My apologies for the technical language at this point but there is no easy way to explain these bits! – If those supplying their logo have a professionally designed logo they will have been supplied *at some point* with a full set of logos in various formats for various uses – eps is the best format for print reproduction of logos and suchlike.

There are many other formats but such formats are best avoided – please do ask the designer/layout person about other formats before sending them.

When sending image files it is mistaken to supply images embedded within a Microsoft Word (or similar) word processing document. It creates unnecessary work in that the designer/layout person has to individually extract and convert every single image file. More importantly Word does not allow the person extracting the file to control that process – so the quality of the file is often further reduced.

It is not a problem supplying images embedded in a document simply to show the placement of images but it is important to *also* supply those images as separate files to ensure print quality is maintained.

Supplying images

Once the images one wishes to use have been gathered together the next question is how best to supply them so that the designer/layout person can practically and efficiently incorporate them into the layout process.

It is important to supply images that are clearly labelled (with short labels!) and are clearly associated with the individual articles and pages they are intended for use with. In addition it assists greatly when the appropriate captions are listed along with the image label (Preferably *not* as *part* of the image label!).

What is required is a clear indication of where one wishes the image to go, its association with appropriate articles and pages and the caption one wishes to use.

Naturally each editor has their own approach to preparing material for layout. This could be a separate list of images supplied – alongside the articles they relate to; image list at the beginning of each separate article or as an image listing as part of your overall page plan.

There is the practical problem of sending a large number of images. If one intends to use many images in one's document then we would strongly suggest the use of one of the *free* online 'big file' sending options (such as *www.dropbox.com*) rather than trying to send many files as email attachments. We are happy to set this up and provide you with more information about such online services.

Having said that, a series of clearly marked emails with attachments can and have worked well for some customers, using the separate emails to separate out both the page sections and related image use.