



Preparing material for print layout Common problems and practical solutions

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This brief guide covers most of the common problems that can arise when preparing material for print layout.

It is based on decades of experience of working with people from wildly varying backgrounds and experiences of preparing material for page layout and print.

The nature of this medium has changed greatly as the technology has changed and developed. Twenty years ago a team of specialists still carried out a series of completely separate tasks to prepare a publication for press printing – page design, typography, image reproduction and preparation, pre-press etc.

With desktop publishing and computer technology this process has changed beyond recognition. Generally, one person can now carry out all of the layout tasks required once the copy (ie the text files plus the images) are supplied.

In one sense this has been a huge leap forward in that people can with just a computer and an internet connection can get press-ready material produced affordably.

On the other hand, the technical skills, training and experience required, has not been reduced. It simply means that the designer/layout person you employ *needs* to be multi-skilled.

Having basic computer skills, software, some basic typefaces and an ability to copy layouts on a computer screen does not equip someone to produce professional, press printed material let alone provides them with knowledge of typography, page design and colour use. Any more than one can become a skilled electrician simply because one owns a screwdriver.

Who you employ to carry out design of your material is still an important question to consider. One still gets what one pays for!

A skilled designer/layout person will be able to guide you through what is required to produce high-quality material. They will have invested in legal copies of professional typefaces, images and software. We hope though that this document assists to cover most of the basic problems people experience.

How material is supplied to facilitate the layout of a publication has, in itself, changed beyond recognition in the last decade. With the development of internet access, images (as digital files), page plans and text as digital files are now supplied direct via email. Adverts are supplied as print-ready single digital files. Proofs are sent directly as digital pdf proof files.

Even marked up proofs are now, generally, supplied as marked up pdf format files and press-ready files can be with the printer the same day that a publication is formally 'signed off' as ready for printing.

The advantage of this is not just *reduced cost* but *speed* – a rapid reduction in the time spent – from the completion of initial gathering of images and completion of typed copy – to arrival of the print ready file at the press.

To reduce *cost* and *time* further this document is intended to reduce *potential delays* in the production of the ready-to-print publication by covering many of the practical problems – so such delays can be avoided – that arise when preparing and proofing material as an essential part of the preparation for production, design, layout and print process.



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How a Designer/Typographer Charges

A designer/typographer charges 'by the hour', with reductions built in for regular work. Design/layout quotations are based on breaking down the assumed time that is, generally, going to be taken for a given size and complexity of a given publication.

This cannot be based just on the number of pages – For example, a traditional 98-page, one-text-column book with very few images may be hundreds of pages long but it is still likely to take a lot less time than a 32 page magazine with many articles and images per page.

Initial designs

Generally the initial publication design will take a while to complete. Once that design (or designs for multiple formatted publications) has been agreed with a client, the actual page layout will take relatively less time to do. This is the reason why regular publication formats will be much more competitively charged. The initial design of a planned regular magazine is going to be likely to take, relatively, much longer to agree than the on-going production of future issues of that same publication.

Regular publications

Naturally, regular publications are a bonus and agreement can usually be reached on a reduced price – for example the cost of the original design included at no extra cost – for such publications. This is usually on the agreement that if an agreed number of issues of a publication is not actually reached in practice then a one-off final charge will be invoiced for.

'Per page' pricing

The 'per page' pricing approach provides an accurate breakdown of potential costs. This is particularly useful when the length of a publication is not absolutely clear at the beginning of the process. This is not uncommon – page length will depend on type size, spacing etc – although a good designer will be able to provide a good 'guesstimate' from experience.

The costing is based on an initial 'set-up and cover' price plus a set fee for each additional page. The designer/typographer should offer a reduced 'per page' price over and above a set number of pages (usually a printer's multiple – 16, 32 etc) for the simple reason that any publication becomes easier, and therefore quicker, to layout as familiarity with the publication increases.

'Additional to' costs

All design/layout costings assume that the material to be supplied is the final text/copy – ie that it has already been proofed and agreed. Naturally, seeing the laid out material on a page may well result in some small changes – and any costing should include a set time cost to cover such amendments/changes by the publisher and/or editor but it should be made clear that, if the content of a publication changes substantially from the material initially sent and laid out, additional delays and charges are very likely to occur. These charges are usually charged as 'per additional hour' costs.

It should be understandable that, if a person is being asked to do the same work a number of times then that person will charge a number of times. Naturally, there needs to be some flexibility – as a new client becomes used to the practicalities of the production process for example – but it is only fair that, when being asked to carry out tasks that are not agreed to in the initial costing then there would, understandably, be 'additional to' charges.

From experience there are two major instances where substantive changes over and above what is agreed in the initial quotation is more likely to occur.

The first is where a publication's author or authors are involved in the layout proofing process. It is fully understandable that an author will, almost inevitably, find things that they can change and/or improve upon. It is a natural response when the line between copy writing and proof editing becomes somewhat blurred – as it has done in the modern production process. Unfortunately, it is additional work for the layout person over and above that which is initially agreed. Therefore it can incur additional charges. We would suggest that, where authors are likely to be involved in the proofing of laid out material, that this is made clear to the individual preparing a design/layout quotation. This possibility can be incorporated into the costing of the publication.

The second instance is for smaller design work – leaflets and posters. These often require multiple initial designs and relatively extensive changes to those initial designs before agreement is reached between designer and client. This is understandable and reflects the nature of such 'immediate impact' material. What it does mean is that one should not expect a quotation to be based on the single or 'per page' equivalent cost given for a more extensive publication. The nature of this type of work and the time likely to be involved has to be incorporated into a costing. Many publishers are, fully understandably, looking for very specific prices – when trying to fit to set budgets. A good design/ typography quotation will only be as flexible as the person doing the work. Some work takes longer than one hoped for, some takes less – within reasonable and agreed levels of additional work a publisher should be able to get an accurate price not one where the final invoice is much higher than the original quotation.



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How to keep publishing costs down

Keeping print costs down

The biggest single cost for any publisher is the cost of printing – unless the print run of the publication is very, very short or online only.

The designer/layout person should be able to assist in keeping those costs to a minimum without loss of print quality or environmental standards. Knowledge and experience of print should be expected, one should never be afraid to ask for suggestions and advise on the matter. One is not only paying for design and layout of a publication, access to use of equipment (software, hardware, professional typefaces, images and illustrations) but also for access to the accumulated experience of the entire process.

The cost of design/layout should include access to full pre-press flight-checking, an intimate knowledge of correct preparation of colour plates, correct and appropriate use of bleed and of imposition for press-printing. Otherwise it could be the publisher who receives an additional bill from the printer for having to redo incorrect plates, re-prints etc. We have seen the disastrous effects of getting untrained layout people to prepare a publication for press printing far too many times. We would strongly suggest that one should not risk cutting your initial publishing costs to the extent that you risk paying much more in the long term for the resulting mistakes. If a design/layout quotation is extraordinarily low – there is a good reason for this!

Another phenomenon – seen far too many times – is the “after sign-off amendment”. A good designer will ensure a new publication is agreed as complete and ready to go to press *before* preparing final press-ready file. It is important to ensure that the process of finalisation is reserved until all possible amendments have been included and agreed. Inevitably there are occasional necessary last minute changes – and these can usually be rapidly resolved given the

technological developments we are all able to take advantage of. But... they should *not* be relied upon as a normal mode of operation. If the designer has already pre-flighted and sent off final press-ready files and if the printer has already prepared plates for printing – one could face a very unwelcome additional cost. It is up to the individual signing-off the press-ready publication to ensure that his publication is indeed ‘ready to go to press’.

A designer/layout person should advise on suitable printer page multiples to keep the cost of plate production to a minimum. A 64 page book printed on a Litho press, for instance, may well prove cheaper to print than 60 page book, for example.

We strongly suggest that one builds mutual relationships with a quality, time-served printer who does not simply ‘print what they are given’ on the cheapest material they have to hand. That only very rarely means going with the absolute cheapest print quotation.

Keeping page layout costs down

The second biggest single cost for any publisher is the design and layout costs. This basic guide covers all aspects of preparing material ready for the designer/layout person to be able to efficiently carry out their task. If that individual is supplied with a clear page plan, clearly marked preparation files, press-quality images, clearly linked to appropriate articles and clearly marked up text files including clear heading, sub-headings, pull-outs etc – their work takes much less time to do. They will be able to pass on this time saving as a cost saving to the publisher.

Please do not hesitate to ask your designer if you have any questions or if you are unsure of the quality of an image for printing. Please do not hesitate to request assistance and planning sheets. Those initial queries can save both parties a lot of unnecessary time and cost.

Keeping edits to a minimum

We discuss these potential problems elsewhere in this simple guide but a couple of the main points are worth repeating because they are likely to result in additional cost if ignored.

One common problem that arises – from experience – is the understandable, but mistaken desire to try and fit far too much text to a page. Not only can that limit the ability of the designer to design that page so that it is something the potential reader wishes to actually read it can also result in the additional cost of further editing and re-proofing as one tries to cut excessive text out of an article. The assumption of the designer/ layout person is that copy is edited down to its final content *prior* to arrival on her/his desktop for preparation.

We do have exceptions to this rule – occasionally clients (usually ones editing longer article format publications) use the “text run on method” of editing proofs – where additional blank pages at the end of the pdf proof show the over-running text flow. This requires a particularly tough and substantive editing approach though, usually at the second proof stage, to avoid incurring additional costs.

The other problem we see on occasion is where the original authors of articles are involved in the post-layout editing process. We understand fully, that this is, sometimes, a necessary and agreed approach to a particular publication, but it does – very often – result in additional edits as that author or authors, understandably, will often want to continue re-writing their contribution to the publication.

We would suggest that, where such an approach is being taken to a publication, this should be raised with the designer/layout person when design quotations are asked for – so that this additional process can be taken into account when the initial price is given.



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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 reproduce 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 use

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.



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Preparing the copy for layout

Copy length

The difficulties an editor faces when preparing the copy for layout depend greatly on the format of the page. For pages which contain longer articles the chief concern is the text length available for each page (taking into account planned image use). This is simple enough in that, if the designer/layout person already has a clear and regular page design format they can supply the editor with a good ballpark figure of the number of words to use.

From long experience, folk always tend to push the number of words for an article to, or over, the maximum word length given. It is strongly suggested though that one uses less rather than more. Having to cut back text after layout will lead to additional work and therefore possible additional cost. It is always easier, in terms of page layout, to 'spread an article out' rather than 'squeeze an article in'.

The art of successful page layout is to present the text being laid out as looking natural, approachable and easy to read – balancing both content and form. Ultimately though this does depend on the amount of copy that the person carrying out this task has to lay out to an individual page (or pages). It is always a shame to see great content lost by being made visually hard to follow because one is attempting to fit too much text content to the page.

For pages containing a series of shorter articles their concern is not only the text length – but also making clear to the designer/layout person the *order* of these articles. Each editor has their own method but we tend to suggest that a series of articles for, as an example, a news page are sent as one word file with the main article at the top and following articles, under their own planned headings, in order of importance. For smaller length publications, a single word-processing file may well be suitable for the *entire* publication – as long as page breaks are clearly marked.

Editing of copy before & after layout

Where multiple editors and commentators are involved in the process of compiling and editing a publication, it is strongly suggested that the process of reaching mutual agreement on content is reached before sending articles out for layout.

We would also suggest strongly that a single designated editor compiles amendments and corrections from multiple authors so that the designer/layout person can then work from a single list of all of the mutual-editor agreed changes.

A designer/layout person should always make some allowance within the costing for small amendments to a page layout – but a series of re-written article elements will be, understandably, charged for *in addition* to the agreed cost of the layout. It is work in addition to that originally agreed.

Where a process of re-writing after an initial layout is part of the process of laying out a publication – such as an academic journal requiring feedback from individual authors after initial layout – this should be raised, discussed and then built into the costing for layout of that particular publication.

Further information on approaches to proofing of laid out pages can be found in the following section of this guide.

Page planning

For the designer/layout person though the key consideration is the page order and feature association of the articles once gathered together for layout.

This *page plan* can simply be 'intended' – giving a rough plan that can be flexibly applied to suit actual text and image contents or very specific – depending on the type of publication. A skilled designer/layout person will be able to visually prioritise the article layout on a page based on the editors pointers – so an exact *page plan* is not always necessary.

A regular publication with regular page features and format, for example, is likely to be much more specific in the *page plan* that one is supplying.

Individual articles – such as word processing documents – should also be marked up for image use and specific feature use, along with additional notes on features such as sub headings and pull out quotations where these are a feature of the publication, and article styles where these are to be specified.

Preparing a *page plan* will assist the designer greatly – it will show the intended order of the publications contents. It will also provide a list so that the designer will know that all of the material intended for inclusion has actually been sent.

It can prove very helpful for the editor. The page plan provides a double-check of the contents you wish to send over, ensuring that all of the material you wish to include in the final printed document have been included in the files sent.

A designer should be able to supply their clients with generic *page planning sheets* which can prove very helpful. Please do not hesitate to ask.



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Proofing of laid out pages

Portable Document Format (PDF) files

Proofs of document layouts are sent as PDF ("Portable Document Format") format files. PDF documents greatly speed up the process of proofing. They are much faster than the traditional method – printing a copy of each proof and posting this proof to the editor so that the editor could then mark up two copies (one that they could keep to check the next version) the proof and post it back to the layout person. PDFs are therefore cost effective as well as faster.

PDFs retain the look and feel of a document even when the editor does not have copies of the same typefaces used on their own computer (the typefaces are, in effect, 'embedded' in the PDF file – without having to formally 'own' a copy of those typefaces – along with the images). In addition, PDF files – being compressible – can be reduced to a much smaller size than the actual press-quality file would be. This makes it easy to send such files via email. They can be easily viewed using the free Adobe Acrobat Reader software usually included as part of one's software package. If the software is not included one can simply download this from:

<http://get.adobe.com/reader>

There are disadvantages as well though that one should be aware of. A proof is a *low resolution* file – it will *not* show how images will print out *completely* accurately on an actual press. Your designer/layout person must be a professional you can trust – one who is aware of print needs and warns of any potential image problems that may be missed when viewing such low resolution pdf files. In addition – colours do not always accurately display. One must remember that one is viewing the proof on a low-resolution computer screen. That computer screen, as well as being low-resolution, is only able to *emulate* the press – 'CMYK' – colour spectrum roughly. It is using a light based – 'RGB' – colour spectrum. (More information on understanding colour spectrums can be found in the additional guide sheets)

Methods of marking up proofs

There is no 'correct' way of marking up proofs for amendment and correction – but there are efficient ways!

Traditionally, two hard copies (that is... printed out copies) of a proof are marked up using traditional copy editor's marks. One copy is retained (for checking) and one copy is sent to the designer/layout person.

The accepted standard marks for copy preparation and proof correction are those of the British Standards Institution (BSI). You can download a set of these marks from the following address:
http://www.cse.dmu.ac.uk/~bstahl/CORRECTION_MARKS.pdf

Every author has their own approach though – the key thing is, of course, that the editor makes clear their intentions to the designer/layout person.

From our experience, many editors prefer a simple text listing. For simplicity this can be reduced to a simple:

"Page[X], Column[X], Paragraph[X], Line[X]
[Original text]
[Correction requested]"

(where the shaded text is replaced with the appropriate editorial changes - the other marks do not need to be included of course!).

With the rapid development of pdf technologies, many editors have moved on to marking up pdf files directly. These pdf files can then be directly sent via email back to the designer/layout person for correction.

The basic version of the Adobe Acrobat Reader software – the standard pdf viewing software is free to download (at adobe.com). It is commonly bundled with a computer's system software. One can edit pdf files without necessarily owning the full version of Adobe Acrobat (the 'Pro' version), but we would suggest that this is a worthwhile consideration if one intends to edit on a regular basis.

We have noticed that the different mark-up options ('annotations') available in the Adobe software can cause some recognition problems on strongly coloured proofs – with small marks being missed by the individual working from that proof. If marks are small we suggest the practical solution of using a sticky note mark to *draw attention to* that mark.

If the amendments required are few it may well be easier simply to call the designer/layout person directly and go through those final changes over the telephone.

Ultimately, the choice is down to what the individual editor feels most comfortable with, of course. A good designer/layout person will be able to work to the editor's preferred editing approach.



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Printing considerations

Print methods

The method you wish to use for printing should be discussed and considered prior to layout of any publication. This choice effects the layout directly and it is expensive for the publisher if the designer has to re-layout a publication because the print method chosen makes the initial page design inappropriate.

Some general considerations to take into account are:

Litho or Digital?

The method of printing will be an important cost consideration, depending greatly on the planned 'print run' (ie the number of copies one wishes to produce). Further details on the reasons for the differences in these print pricing structures can be found below. The immediate question is more a practical one – one of making the designer aware of the chosen method so that image settings can be set up to use the appropriate colour spectrum settings, page numbering sets etc.

Binding

This is a key final element of publication production – whether the publication is to be, for instance: *perfect bound* (like a typical book with a 'spine'), *stapled* (using staples – like a typical small magazine finish), or *wiro-bound* (using a combination of holes punched into the collated pages and curved wire – so that the open document pages can be laid flat).

These differing approaches to binding directly effect the space that has to be taken into account when setting the inner edge of the resulting printed pages.

The differing approaches effect what multiple of pages the designer/layout person should be aiming for to achieve a 'printer's multiple' suitable for press-printing – and whether the cover is to be printed separately or an integral cover is planned.

Colour choice

Colour choice makes a huge difference to print costs if one is, for instance, printing many copies of a publication on a litho press. On the other hand if one intends to only print say 100 copies of a publication on a digital press it make no difference in price if the text pages of the document are printed in full-colour, with a limited spot colour or just in greyscale.

It should be an obvious point though that the designer/layout person will need to know one's colour intentions prior to laying out that publication.

Paper choice

Your paper choice – usually a personal quality and/or environmental decision – will also effect the choice of ink use directly and therefore the designer's publication settings. It will also directly effect the quality of the printed material – the design and can only be as good as the material it is printed with.

Print choices can seem bewildering – but they should not be once, a good printer is aware of your needs. They should be able to clarify and assist you as to what options are most appropriate for the budget you have available. Any good designer/layout person will also be able to advise and provide recommendations for quality printer's they will already know. A designer should know the print process to do the work they do – unfortunately this is knowledge has declined as younger designers, working primarily with newer online technologies, have not had the opportunity to learn about print technology on design and related educational courses.

A few notes on Digital v Litho print

Digital printing is a recent and still rapidly changing development of print methods. it opens up the possibility of very short runs of publications – and 'print on demand' opportunities.

Digital Printing is still a developing technology and designers were, rightly, very wary of the wildly varying quality and colour accuracy of Digitally printed material. It is improving rapidly but we have to offer one more word of warning – unfortunately the resulting automation of the process has also led, to an extent, to a de-skilling of the people that operate the machinery – That also effects quality. We strongly recommend time-served printers.

Traditional Litho Printing means that print costs '*per copy*' are reduced the more one is printing in a single print run. One is paying for, in effect, the initial expense of 'setting up' the press and of lining up the sererate printing plates. The material costs of ink and paper are, relatively, low – they not the main consideration. Therefore the more you print, the more you spread the initial costs of the print run over an ever greater number of individual copies of that publication.

Digital Printing on the other hand is, to use a limited and generalised but – hopefully – useful analogy, a bit like printing to a large version of one's home inkjet printer. The cost of printing is primarily the material cost. Each individual book will cost the same whether you print one copy or 10,000 copies. The big advantage is that one can, if necessary, print a single book!

What this means practically? – It means very short print runs of a publication are much cheaper to produce on a Digital Press. Long runs are much cheaper (relatively...) to print on a Litho Press. From our experience though, many of our customers fall 'somewhere in between' – 500 copies of a 72 page A5 book can prove to be as expensive using either method.

Where costs, storage and/or likely sales are important issues one should also consider these when making that print choice, of course.



Preparing material for print layout Common problems and practical solutions

Additional questions that arise

Computer platforms

Just occasionally we do get queries regarding potential computer platform clashes. In reality – regardless of the platform used by designer, customer and printer – design sharing software is completely compatible across different platforms.

PDF file are readable regardless of platform, text files are compatible across all platforms. Kavita Graphics uses Apple Mac computers. This reflects the niche market that this platform once held in the design and pre-press market and, therefore, our resulting experience rather than any particular preference. Most of our clients use PCs so we have to be professionally set-up to be able to work with all the files we receive from these customers so as to provide our service.

Text file translation

One occasional problem we find is with older software files – particularly with *Microsoft Publisher* files. These are not readable on an Apple Mac. Very occasionally we are sent much older software format text files which cannot be opened – the resolution to this problem is to supply 'text only' (".txt") or 'rich text format' (".rtf") files.

Another occasional problem is conversion between right-to-left reading (Arabic, Urdu, Farsi etc) language documents – usually regional variations of *Microsoft Word* documents – and left-to-right reading publishing software. This is also easily resolved with compatible software (*Mellel* or the open-source – free – *Open Office* are particularly recommended) and the designer can also share compatible cross-platform *OpenType* or *OpenType/TrueType* (a hybrid format for screen viewing but generally *OpenType* compatible) typefaces to ensure correct character translation.

Typeface/Font use

We felt it worth offering some general information on Typeface/Font use because it is a question that occasionally arises.

There are a number of different digital Typeface formats – the main one's used to be *Postscript* and *TrueType*. Most of the typefaces bundled for free with one's computer system software are *TrueType* format fonts. For print ready layout *Postscript* typefaces were required. While *TrueType* fonts appeared perfectly well on-screen (which is the purpose they were intended for), problems often occurred when the press-ready files were being processed using the postscript language required for print preparation.

This problem (and the incompatibility of *Postscript* typefaces across different computer platforms) is being resolved with the introduction of cross-platform and ready-for-press '*OpenType Postscript*' fonts. Increasingly, good design software packages, such as the *Adobe Creative Suite* even bundle high-quality *OpenType* fonts as part of the package. Newer versions of basic system software also include a number of *OpenType* fonts.

Importantly, *OpenType* fonts can have many more individual characters – full Unicode standard compliant fonts can include characters suitable for use in many languages ensuring consistency across publications produced in multiple translations or as multiple languages.

Computer screen fonts and 'Web' only fonts (another new development) remain just that though – they should not really be used for press-quality printing. Not only are they not good for postscript production but, as importantly for the design of a publication, the spacing and letter shapes are designed for the specifics of working visually on a low-resolution, light-based colour spectrum screen – not for high-

resolution printed pages. What looks good in one medium simply does not work in another.

Specialist software is still required to work with typefaces in different languages though – particularly where a language flows in a different direction to others (for example combining a Latin 'left-to-right' and a non-Latin 'right-to-left' language in one document).

Occasionally a designer will be asked if they can 'share' a font or font family. Unfortunately, professional – full (and expensive...) *Postscript* and *OpenType* font families are copyrighted – they should not be shared with other parties. To do so would break the contract one has accepted when buying the right to use from a type foundry. Those parties are meant to buy the rights to use of typefaces on their own computer. Good designers will have invested heavily in high-end fonts and, occasionally, may have to pass on the cost of buying specific fonts if these specific fonts are required.

Typeface copyright laws are broken constantly and cheap sets of fonts are available – usually poor copies. As with all cheap options, one only gets what one pays for. If you are paying a professional they will be buying in high-end typefaces as part of their work for use in your material.



Preparing material for print layout Common problems and practical solutions

Additional questions that arise

Colour spectrums

For preparation of print ready material, for proofing and for logo preparation, colour spectrums are very important.

Colour in print and on-screen

If one views Litho printed material with a magnifying glass one can see that the vast, vast majority of this material is printed using a combination of four dotted colours – Cyan, Magenta, Yellow and Black (known as the 'Key' colour in print). Therefore 'CMYK' printing.

If one views a computer screen with a magnifying glass one can see all the visible colours are a combination of three – Red, Green and Blue, hence 'RGB'. This has changed slightly with the development of new screen technology – but the principle is much the same. Office inkjet print outs tend to fall 'somewhere in-between' – but, even if fully calibrated (which is unlikely in most offices), they are still only trying to emulate CMYK press colour.

The CMYK spectrum is a subtractive colour system (see: http://en.wikipedia.org/wiki/Subtractive_color for more information). The RGB spectrum is a light-based, additive colour spectrum (see: http://en.wikipedia.org/wiki/Additive_color for more information). The two spectrums can only try and emulate each other – therefore when one is viewing a pdf proof online, or a layout on a computer screen, one is seeing an emulation of how the proof will actually print. This is why designers and printers use standardised CMYK colour charts – usually the Pantone model – to ensure accurate colour reproduction rather than 'mixing colours' on an RGB computer screen.

Spot colours for print

There are exceptional 'Spot' colour – special ready mixed fluorescent, metallic and pastel colours for example but these are the exception to the general rule – and have the same problems of emulation on a computer screen or as an office inkjet printout as CMYK when being proofed.

Logos/Branding and colour use

This is also why professional logo/branding design includes different versions of the same logo – one for online (RGB) and one for print (CMYK). A logo bundle certainly should include these different options – a designer needs to find, for example, colours that are as close to each other visually from the different colour spectrums used if that logo is to look the same online and in print.

Colour for print

In addition, designers should be using special calibrated computer screens – and these have to be constantly re-calibrated – so that the on-screen representation is as close to the final cmyk printed colour as possible. And, where this is simply impossible (certain shades of green/blue for example) – an intimate knowledge of pre-press – the differences between one's own equipment and the press one is working with – is required. We feel that anyone doing such work who is not aware of the dangers should probably not be doing such work.

High-end art image reproduction

The varying colour spectrums are a particular concern when proofing high-end art reproduction on a screen in preparation for print. There is no easy way around the process when the intention is very accurate reproduction. We would strongly suggest that an artist or publisher goes to the press (after preparation for press by a knowledgeable pre-press designer) and then proofs and works directly with the skilled print technicians when that work is being printed. A skilled team will be able to 'tweak' the finish – they will know their equipment inside-out and what they can get out of it, just as an artist knows their materials – cameras, paint pigments etc.

Some printers are still able to offer carefully calibrated, high-end scanning of art images but this is now the exception rather than the rule as the technology has been almost phased out.

Design templates

Templates are the setting up of page layouts, type specifications and colour specifications for a publication.

Where a designer/layout person is asked to prepare an initial template – one that the client wishes to use themselves – we would always recommend access to, and some training in, one of the main desktop publishing (dtp) software packages by that client – *Adobe Indesign* or *QuarkXPress*. A little hands-on training – an introduction in how to use a particular template – is always going to be an advantage as well.

Such template production and hands-on training is never going to be cheap but it is a one-off cost. The client will need to purchase sets of typefaces, the software and regular images to be used and the designer is, in effect making themselves redundant after setting up the template so they will, quite understandably, figure this into their working costs by charging a higher fee.

The introduction of computers as everyday household and office items opens up the possibility of easy self-publishing. It does not though replace hundreds of years of development of typography and page layout skills just as owning a set of painters brushes does not mean one can automatically start creating great art.

Microsoft Word templates

We are often asked about creating templates in *Microsoft Word*. Unfortunately, *Word* is not a proper dtp software package as much as it tries to be 'all things to all people' – one cannot control type settings across different versions of *Word*. The most useful application of design skills to *Word* we have found is use of background images – creating static 'text' areas – over which letters and suchlike can be typed. This is effective for branded stationary and similar material for organisations – once the letterhead template has been set up for use across an organisation.