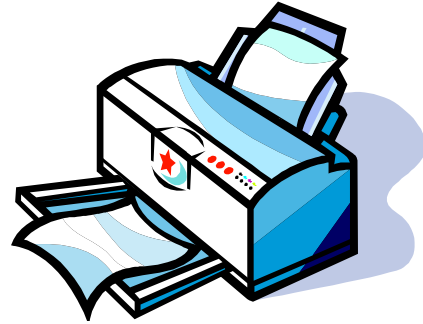


Planning for External Printing Services

The Move Back to Print

More and more companies are returning to the printed format, both as a value-added marketing tool and as a means of keeping customers satisfied. As technical communications specialists, we need to be in the position to provide solutions to our company's documentation needs, whether online or printed.



This article provides guidelines and useful information on the process of printing documentation through an external printing service. For those who are new to the printing business and who need to print documentation for the first time, the tips discussed here will help you plan for an external printing service.

Defining Your Printing Needs

Defining your printing needs starts with understanding your customers and defining the documents that they require. You should be able to answer the following questions, before starting to write your documents:

- Who are your customers and what documents do they expect or need to receive as hardcopy?
- What needs to be printed versus what can be kept online?
- How often is printing required per year?
- What budget is available for printing?

Answers to these questions will determine the type of documents you design.

An example of a document that you may need to print is a hardware installation manual that accompanies the shipment of a product. The customer usually expects to have some form of hard-copy documentation, before commencing with the installation and configuration.

The number of times you need to reprint a document per year will influence the type of design and the method of print used.

The available budget will often determine not only what you decide to print, but also the printing method used.

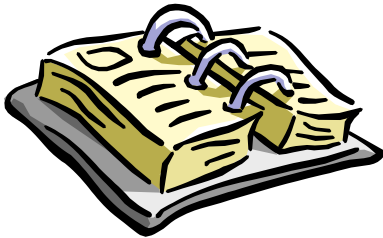
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Determining the Type of Printed Output

The second issue to consider is the format in which the customer will receive printed documentation. Printed formats include files, books, booklets and pamphlets.

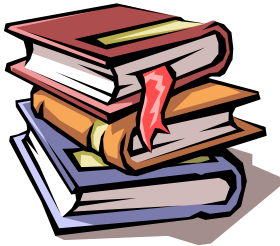
Files

A file consists of a series of pullout modules, enclosed in a loose-ring or spiral holder. A folder-type manual may be more acceptable in certain industries, such as telecommunications and aviation. It is also suitable for manuals that require a mixture of modules and constant version updates (four or more revision cycles per year) and which require a small amount of copies (100-1000) per release. When a module is updated, the relevant section in the manual can be replaced, without the need to reprint the entire book. Replacing a module can also be done in-house, using a simple two-sided laser printer. Files are also appropriate for modular training material.



Books

An alternative to the file is the cover-bound 'book'. The advantages of books are that they are cheaper to ship and take up less space on the shelf. They are also easier to carry around and more convenient to handle. A book format is suitable for production in large quantities, or where the time between updates is extended (e.g., only 1-2 print cycles per year).



Booklets

The booklet format is similar to a book, although shorter in length. A booklet may or may not have a cover and is usually bound with stapling pins. Examples include annual reports, company profiles and product descriptions.

Pamphlets

This format is suitable for brochures, short company profiles and brief product descriptions. A pamphlet could be a single, double-sided page or two or more pages. Pamphlets are also suitable for quick tutorial guides or lists of menu items and keyboard shortcut commands.

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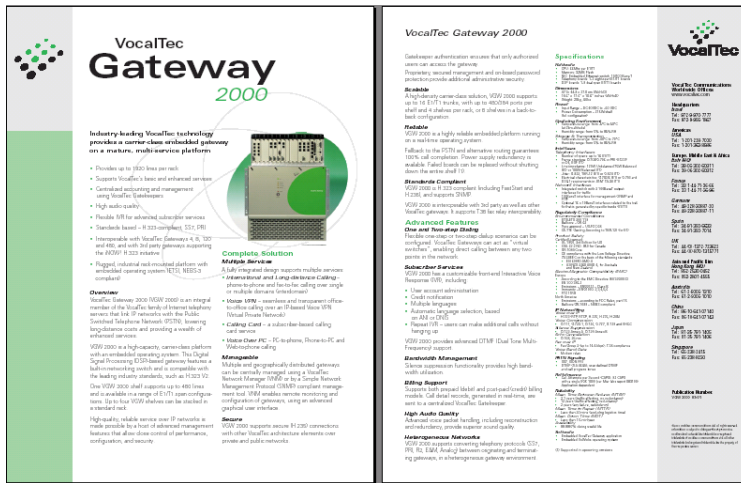


Figure 1. Double-sided, 4-Color Product Brochure

Paper size

Considerations regarding the paper size that you use to print will vary, depending on the requirements of your customers. For file formats, A4 or US letter can be used. Letter size is the standard in the US, whereas A4 size is used in Europe.

For books and booklets, you can use a standard book size or a variation of this size. You can customize the size to fit on a low shelf or be included in a box.

When should you outsource?

Once your company has made the decision to move towards printed documents, you will need to decide whether or not printing in-house is sufficient and cost-effective or whether to outsource to an external printing service. You may have specialized production equipment available in-house, for printing, cutting and binding, and a dedicated department for handling this. Most companies find it more cost-effective to outsource printing needs to an external printing service.

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Finding a Suitable Printing Service

Work together with your purchasing department to negotiate the best deal with an external printing service. In a competitive environment, printing services are more amenable to negotiation. Price quotes usually include the following details:

- Number of pages per document
- Number of copies
- Number of colors
- Paper type and weight
- Lamination and other finishes
- Irises/proofs
- Binding and shrink-wraps
- Shipment and delivery

Types of printing

There are two major types of printing. **Offset press** involves the use of plates (film). For large-scale production, which involves more than 300 copies per print batch, offset printing is economical and provides high quality. **Digital press**, also called “print on demand” or computer-to-plate (CTP), removes the need for special plates and prints directly to the printing machine. Digital printing is a fast option that is appropriate for small quantities. If you have a small shipment for a specific customer (e.g., 5-50 copies) that needs to go out within a few days, then consider this option.

Most printing services will be able to offer you both options. Some may specialize in either type.

Inclusion of colors

Price quotes include the number of colors in your printed material. Many manuals require only black and white – graphics are printed in grayscale (different shades of black and white). Each color that you add to the printing increases the printing costs.

Normally, manual covers and brochures are printed in 4-color (CMYK process) or more. Your cost-considerations should be taken into account before designing graphics or cover artwork.

For maximum reusability of standard company material, it is best to design a generic production that does not need to be reprinted for each release. The section that needs to be updated could be a single black and white text piece, while the background remains changed. Release numbers, product names and address information can be designed in black and white, making these easy to replace, by updating a single plate or printing directly onto an existing piece, rather than having to reprint the entire piece.

Defining pantone colors

Pantone (PMS) is the de-facto color-matching standard for color production on paper. Pantone defines a range of process colors and tints, in glossy and matt formats. Glossy format is usually used for logos and text parts of a graphic image, since it produces a smooth, shiny surface, while Matt is suitable for a background, since it absorbs light and has a grainier texture. However, an entire design can be either glossy or matt, according to your preference.

For more information on pantone colors, refer to <http://www.pantone.com>.

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Types of paper and varnishes

Your printing service will suggest a choice of paper types and weights. The weight of a normal printed page is around 120 grams. Covers and brochures are between 180-220 grams. Paper types include pulp and recycled. In addition to the paper, you can also choose the type of surface (glossy or matt) and finish. Lamination for example is a protective coating or varnish that is usually applied to covers and brochures. Lamination keeps the graphics fresh and prevents smudging or fading after extensive use.

Types of binding

Binding includes die cut, fold, bind, drill and glue.

Shrink-wrap

A shrink-wrap is a sheet of transparent plastic that is wrapped around a set of documents or CDs. A shrink-wrap conveniently binds together several documents in a single package, ready to be shipped to the customer.

Box packaging

Specify how many items are to be shipped in each box and request the printing service to clearly label the box with the name of the item and the amount contained.

Warehousing

Some of the larger printing services can provide storage facilities for your documentation. This is particularly advantageous if you need to keep template versions in storage (e.g., of covers, and then have them attached to new releases).

Choosing an international printing service

In today's global market, you may want to consider using a foreign printing service. Printing services in some countries can provide attractive prices. If you have a branch office in a country where you need to deliver printed material, it may be worthwhile to check this option.

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Sending Material to the Printing Service

Depending on the printing service and the type of printing method that you are using, you may be required to send one or more of the following:

Laser-printed hardcopy

A hard copy of the manual can be printed out using a high-quality laser printer. Some printing services may be able to print directly from this file. The printing service needs a hard copy as a guide to layout and pagination.

Postscript files

A postscript file is an output file that you print using a print driver, directly to a file on your disk, rather than to an external printer. The file has a PS (postscript), a PRN or an EPS (Encapsulated Postscript) file extension. Your printing service should be able to supply you with a suitable postscript driver. Postscript drivers that work with Adobe Acrobat can be downloaded from the Adobe web site at www.adobe.com. Postscript drivers are also available on the Acrobat installation CD, FrameMaker and Windows installation CDs.

Portable Document Format (PDF) files

The printing service distills or converts your postscript file into a PDF file, for viewing. Most printing services are able to print directly from high quality PDFs, eliminating the need to send postscript files. Adobe Acrobat can be purchased from www.adobe.com. Adobe is the official supplier of the Acrobat Writer used for producing PDF files. An important recommendation when producing PDF files for print is not to use the automatic Acrobat PDF writer option, since this produces a low-resolution copy that is not suitable for print.

Source files

Printing services usually only accept postscript or PDF files. However, some may be willing to accept original source files or graphics in high resolution JPEG format, and then produce a postscript file on their end. The advantage of this is that you do not need to worry about producing the file. However, the disadvantages are in terms of control, and added cost. The same file may also print differently on a different machine.

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The Print Production Cycle

This section describes the steps taken when preparing a document for printing.

Step 1: Preparing a production file

Prepare a production file for your warehouse and shipping department that specifies what documents are to be included with a product or release shipment. Each item should have a catalog number, enabling the warehouse to keep track of versions.

The production file can also be sent to the printing service, and should include specific instructions on the printing, for example pagination and blank space issues, cover layout, type of binding, shrinking and packaging.

Step 2: Printing camera-ready copy

After a document has been reviewed and approved by all subject matter experts and other editors, it is ready for production. The first stage involves printing out a camera-ready copy, using your postscript printing driver (soft copy version) and your local laser printer (for a hardcopy version).

Most printing services request the inclusion of crop marks, which indicate where to cut the paper. On FrameMaker, the crop mark option is available. MS Word, on the other hand, does not provide crop mark features, but macro text can be added to the header and footnote, which will automatically add the crop marks to the printed version.

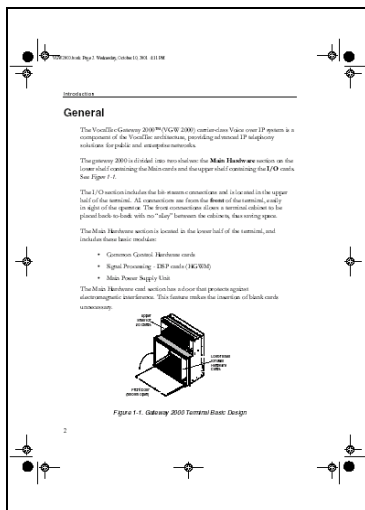


Figure 2. PDF file, Showing Crop Marks

Color brochures, book covers and other graphic collateral usually also require the inclusion of a “bleed”, an area of color that extends a few millimeters beyond the crop boundaries. Registration marks and a color calibration bar can also be included. Request your graphic artist to supply the design with a bleed and other marks.

If you are producing a postscript file, then print this out to a file or convert it into a PDF file (using Acrobat Distiller). Print out a copy of the file or PDF on your local printer.

If you are sending a PDF file to the printing service, then make sure that you select the ‘*Maximize for print*’ option. The resolution quality for most printing services is 300-600 DPI. This will ensure that the quality of your graphics is maintained.

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Send your postscript file in a zipped email to the printing service. Large files that cannot be sent by email can be burned on a CD. Some printing services may request that you send a printed copy. Print out two copies, one for yourself and one for the printing service.

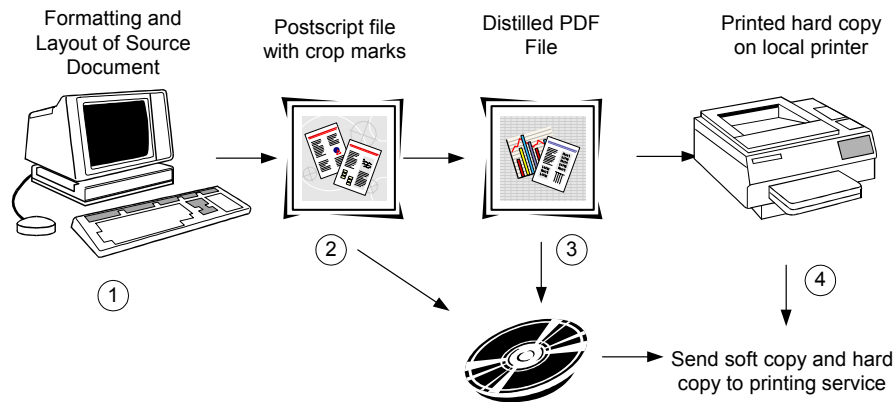


Figure 4. Preparing Copy for the Printing Service

Step 3: Reviewing proofs and blueprints

The printing service will send you a proof of your document. This could be a plain, black and white copy, or a blueprint. A blueprint is a proof created by exposing negatives over photosensitive paper to light. The blueprint paper is used to check the position of all the image elements and to give you an idea of the final layout and text. The printed resolution will be better than what appears in the blueprint.

If there are any corrections, mark up the proof or blueprint. At this stage, corrections should not be related to mistakes in the document that slipped through your review process, but to mistakes on the printing service's side – for example, mistakes in pagination or binding, missing font information or text or graphics that printed poorly. While it is possible to request text changes to a file, during the proofing stage, this is not recommended, since it adds to both the time and the cost of the production.

You may be able to send a postscript file containing only the corrected pages. You can then approve just the changed pages. Some printing services may request that you replace the entire file and approve a new proof.

For brochures and covers that contain color-graphics, printed in process (four colors), you will receive an iris. When proofing the iris, pay attention to the color tones, using your pantone booklet to verify that they are correct.

Step 4: Receiving the final copy

Try to be present when the printed goods arrive at your warehouse. All boxes should be carefully invoiced to ensure that the correct quantities of each type of document have arrived. Review the documents to ensure that they have been printed to your satisfaction.

Finally, check with your warehouse and shipping department to make sure that the documents are properly stored and that all staff involved are familiar with the documentation packages that need to be sent out with each release.