PREPARATION FOR OUTPUT

Matthew Boulton College

FILE PREPARATION FOR OUTPUT

The following steps will help avoid confusion and problems during output:

Remove Pages Which Are Not Required For Output
Remove blank pages which can appear at the end of the document. If certain pages or images are required from a document, create a new document that includes only those pages or images.

Remove Stray Fonts
If fonts have been changed during production there maybe spaces or 'carriage returns' that will hold the extra fonts. They will not be visible on a laser proof and can cause problems during output.

QuarkXPress and PageMaker have features that list all fonts used in the document, and shows where they are used. Use this feature to remove stray fonts.

Check and Update Links to Graphic Files
Popular page layout programs also have features that list graphic files used in a document and show whether any files have been changed since they have been imported. If any linked graphics have been changed the links will need to be updated.

All graphic files need to be in the correct format for the imagesetter (TIFF or EPS). If the files are in the wrong format they will need to be re-saved in the graphics program (Adobe Illustrator, Freehand, Corel Draw or Photoshop). Then update the link by importing the files into the page layout program (QuarkXPress or PageMaker, etc.).

Check Scale of Graphic Files
All graphics files should be imported into page layout program at 100% or same size. If graphic files dimensions have been adjusted in QuarkXPress or PageMaker, it will slow-down the time to output the files.

Convert Type in Graphic Images to Outline Fonts
When a graphic includes type that is altered with fills, rotations or other complex manipulations, converting the type to outlines, will simplify the RIPing process and avoid problems of missing fonts when output by imagesetter.

Check Thickness of Rules
Hairline rules may not appear on film output. Amend rules to be 1pt in thickness.

Delete Any Scrap Text or Graphics From The Pasteboard
Many page layout programs allow extra material onto a 'pasteboard' area, outside the page limits. It is easy to forget about these elements, but they may appear on the film output. Make sure to delete material from the 'pasteboard' area.

Check Colours Are Specified Correctly
Most page layout programs define colours in 2 ways:

- Spot Colours
  Printed by custom inks

- Process Colours (CMYK)
  convert all RGB files to CMYK

If spot colours are being used, check list of defined colours and make sure that each is defined under just one name. Each named colour will separate on a different plate.

The best way to find out whether colours will separate correctly is to check them with a separated laser proof.

Check Bleeds and Traps
Check any bleed allowances for artwork or colour that runs to the edge of the paper. If vector-drawn illustrations are being used, traps must be created in the original drawing program, before the graphic is imported into the page layout program.

Proof files on a Postscript Laser Printer
The best way to find out how a file will react on an imagesetter is to proof files on a postscript laser printer. If the file is in colour, it is best to print 2 sets of laser proofs:

- Separated
- Composite

Separated proofs show if files are defined correctly for 4-colour or spot-colour separation.

Unseparated or composite proofs can be used to check for typographical and literal errors.

Preflighting Files
Using preflight software performs a series of checks before output to an imagesetter. The results can be rectified before film or plates are wasted.

Preflight procedures search for the most common errors in files. Missing fonts and graphics are the most common problems. The second most common is incorrect colour specification (usually RGB rather than CMYK).

Examples of software that can be used:

- Extensis Preflight Pro
- Markzware Flight-Check

CHECKLIST FOR OUTPUTTING FILES

Below is a list of information required to output files:

1 Name of Files to be Output

2 Laserproofs
Provide separated and unseparated laserproofs
Output films can be checked with these proofs to see if there are any discrepancies.

3 Storage Medium
If files are stored on zip, syquest or CD check that they can be accessed and output by the imagesetter.

4 Page Setup
Specify which pages of each file are required for output.
How many copies?
Final page size
Scale at which they are to be output

5 Font Usage
List fonts and manufacturer, i.e. Linotype Times,
Weights and variations

6 Imagesetter Output
Type of output: film or paper
Resolution: 2400dpi, or 3600dpi
Screen Ruling: 133lpi, 166lpi, or 175lpi
Correct reading or reverse reading
Negative or positive

7 Separations
CMYK and / or spot colour

8 Colour Proofs
Are digital colour proofs required along with films?

IMAGESETTERS

Imagesetters use a laser light source to expose digital images onto photosensitive film, paper or printing plate.

Files are past through a raster image processor (RIP) which translates the postscript data into a pattern of dots that can be exposed by the imagesetter.

Not all imagesetters can produce output, large enough to handle an entire imposed multiple page section. Certain imagesetters output film in smaller sections or pairs of pages. These pieces of film are then manually planned to form larger sections and then plates are produced.

Imagesetters can be set to perform at different resolutions. some can expose images at 5000 dots per inch and higher, but the most common settings are 1200, 2400 and 3600 dpi.

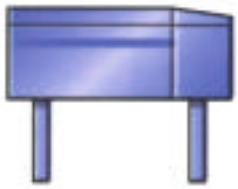
When producing colour work, it is important that an imagesetter has good repeatability, so that a mark at a certain coordinate appears at exactly the same location on each page. If dot placement is not exact, separations will not register properly. Imagesetters that wrap the film around a drum (drum imagesetters) often have better repeatability than those that draw the film past the light source (capstan imagesetters). However some capstan imagesetters have repeatability that is more than adequate for most jobs.

RIP (Raster Image Processor)

Imagesetter

Most imagesetter include 3 components:

- Raster image processor (RIP)
- Imagesetter
- Film Processor: which develops the film, paper, or plate output



Processor

The above components can be incorporated into a single piece of equipment or maybe separate units.

Problems With RIPS

In the 1980's a repro house was a 'closed loop' system, taking a marked-up document layout sheet and transparencies from the customer and integrating the whole thing together for output to an imagesetter. That meant if something was wrong with the films, it was the repro house's fault.

By the early 1990's, most designers were creating their own finished 'ready to output' documents on Apple Macintosh computers or PC's, complete with high-resolution scans and fonts and sending the whole file to the repro house. In theory all the repro house had to do is open the file, RIP it to the imagesetter and collect the films.

In practice it is a bit different. Unlike repro professionals, most designers have only a scant grasp of what makes a file run smoothly through a RIP and out to an imagesetter. This leaves

the repro house vulnerable to badly produced files. They can take hours to produce film with missing images, bitmapped fonts and text with line endings different to the original proof.

The raster image processor (RIP) acts as an interpreter converting the files from the Mac or PC into postscript language for the imagesetter to understand, to produce the final output on film, bromide or offset printing plate.

Every repro house has a different pre-press system or configuration, which is different to the desktop Mac/Laser printer set-up on which most documents are originally designed. Each RIP interprets the postscript data in a different way. Postscript was originally conceived as a page description language to communicate between a desktop computer and a low resolution printer. It was never designed as the high-level language it has now become. Manufacturers of RIP's like Harlequin and Adobe have created equipment which produces from the imagesetter different output film results.

QUESTIONS ON PREPARATION FOR OUTPUT

(1) Name 2 checks that need to be made to graphic files which will minimise problems during output ?

(2) What is the minimum thickness of rules ?

(3) Name the colour modes that graphic files may use ?

(4) When proofing pages on a postscript laser printer, why is it best to produce a composite and separated proofs ?

(5) When using 'Preflight' software, what are the most common errors that it finds ?

(6) When sending files to a pre-press bureau for output, list the information required ?

(7) What is the function of the raster image processor (RIP) ?

(8) What is the name of the unit which develops film, paper or plate output ?

(9) Briefly describe why there can be problems with RIPs when outputting files from a pre-press bureau ?