Identify the hardware and software systems typically used in pre-press

Inside the Computer
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Hardware used in digital prepress:

(a) Computer platform, e.g. PC or Mac
(b) Display: monitor or flat screen
(c) Graphic pen tablet
(d) Low resolution printers
(e) High resolution printers
(f) Imagesetter/CTP systems
(g) Scanners: flatbed or drum
(h) Modem/ISDN
(i) Raster Image Processor: RIP
(j) Storage devices:

Storage of Files
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CD-R or CD-RW: 700mb
DVD-RW: 4.5gb
Zip
Jaz
Optical

Computer software applications used in pre-press

Word Processing
Microsoft Word
WordPerfect

Photo-Editing
Adobe Photoshop

Drawing
Adobe Illustrator
Macromedia FreeHand
Corel Draw

Page-Make-Up
QuarkXPress
Adobe PageMaker
InDesign

Scanning
Adobe Photoshop
Scanner software can be installed into Photoshop as a plug-in

Colour Management
Kodak
Agfa
Heidelberg

Imposition
Preps
QuarkXPress Inposition
Heidelberg

Portable Document Format (PDF)
Adobe Acrobat
Global Graphics: used by QuarkXPress 6.0 to create PDF files.

Raster Image Processor (RIP)
RIPs can either be software or hardware. Hardware RIPs are either an integral part of the imagesetter or CTP system. The software RIPs are placed on the computer to process files prior to sending to the imagesetter or CTP.

Pre-Flighting
Examples of software:

(a) Extensis Preflight Pro
(b) Markzware Flight-Check
(c) Enfocus Pitstop Professional (Plug-in for Adobe Acrobat)

This software is used to check documents for the following:

(a) Founts - postscript
(b) Pictures
(c) Colour Information
    RGB or CMYK
    Process or spot colours
    Trapping

File Transfer
Email: maximum file size: 2mb
ISDN (Integrated Services digital Network): 40mb

Calibrating Hardware
Hardware devices such as scanners and imagesetters will usually need to be calibrated so that they input or output digital information to a known standard.

The object of the pre-press area is to create one or more image carriers containing images which, when printed, will faithfully reproduce the original hard copy or electronic document.

Colour
The reproduction of colour is a complex subject requiring sophisticated hardware and software systems which will operate in a predictable and controlled way.

Colour is usually displayed on a screen using Red, Green and Blue (RGB) colour but is often printed using the Cyan, Magenta, Yellow and Black (CMYK) colour mode. The conversion between these two modes is a critically important function within the pre-press area.

Colour images in digital documents may exist in either RGB or CMYK mode and may be composite or separated.

Identify that the colour separation of original images and conversion to CMYK digital files can take place either:

(a) When the original is scanned (using the scanning software)
(b) During or after any retouching (using photo-editing software)
(c) At the output stage from desktop publishing software
(d) When the document or file is sent to a colour printer
(e) When the file is ripped (providing the RIP software has that facility)

For reliable and predictable colour reproduction, the pre-press operator must know where any colour separation or colour mode conversion is taking place within the workflow.