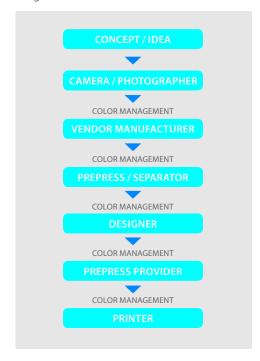# How to Create and Supply Digital Images

The key to successful, reliable digital images is understanding the life of a digital image from start to finish. Knowing what type of image to supply is crucial in the success of your project.

The Life of a Digital Image
The diagram below illustrates the cycle of a digital image. These guidelines help ensure that our customers are receiving the highest quality digital images.

CONCEPT / IDEA

▼

CAMERA / PHOTOGRAPHER

▼

COLOR MANAGEMENT

VENDOR MANUFACTURER

▼

COLOR MANAGEMENT

PREPRESS / SEPARATOR

▼

COLOR MANAGEMENT

DESIGNER

▼

COLOR MANAGEMENT

PREPRESS PROVIDER

▼

COLOR MANAGEMENT

PRINTER

The Camera
If possible, images should be shot at 100% to 125% of intended use size. We realize some photography and design workflows make this impossible. For more in-depth information on image submission, photographers can refer to the Digital Image Submission Criteria Group website: www.disc-info.org.

Photographers
For digital photographers who have not yet worked with Quad/Imaging, we recommend submitting test image files at least one month prior to image delivery to Quad/Graphics. Optimum quality is achieved by collaboration between Quad

Image Capture experts and you, the supplier. Allow time for testing and color management discussions.

Company/Manufacturer/Designer
Below are some guidelines to ensure high quality image reproduction. Check for the following:

RGB Images / Profiles
A profile should be assigned. An assigned profile may be either a camera profile or a working space profile like AdobeRGB (1998).

To see if a profile has been assigned, select "Document Profile" in the Document Information pull-down menu in the bottom left of the Adobe Photoshop™ dialog box:

When this option within Photoshop is activated, open images will appear as either a "Tagged" or "Untagged RGB" image in the display.

If a profile is not assigned, notify your photographer or contact your printer so they may color-manage the image(s).

For CMYK Images
No profile needs to be assigned. Resolution should be 300 ppi. Physical size should be 80% to 125% of intended use. Save your image(s) as uncompressed TIFF files without embedded profiles.

For general profile information, see: www.color.org. This website is developed by the International Color Consortium.

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Image Resolution

The ideal resolution for printing is 300 pixels per inch (ppi). If your resolution is lower than 300 ppi, it may still be acceptable. Some cameras output images at a lower resolution with a larger dimensional size. Some examples of this could include:

Example A

A 4.0 megapixel camera may output an image at 180 ppi resolution with dimensions of approximately 12.5 x 9.5 inches. Increasing the resolution to 300 ppi will make this image approximately 7.5 x 5.5 inches. The most common way to increase the resolution is to open the image in Photoshop, under the image menu select image size. *Uncheck the re-sample box* and enter 300 in the Resolution box. The physical dimensions will automatically be affected by the new higher resolution selected. *Re-sample image* must be unselected or an undesired image interpolation will occur.

Example B

If an image resolution is 72 ppi with dimensions of 20 x 26 inches, increasing the resolution to 300 ppi will make this image approximately 4 x 6 inches in size.

Noteworthy Points

• Digital images should be supplied as high resolution 300 ppi RGB or CMYK TIFF or EPS files. If they are not supplied to youthis way, please contact your photographer or vendor for a new file.

• To achieve the highest quality images, we recommend uncompressed file formats (TIFF) be used throughout the capture process. However, if compression is necessary, the least compression or highest maximum quality should always be selected.

• Quad/Imaging specializes in separations, conversions and color management to yield the best reproduction from image capture to press. If you have any concerns regarding a profile, color management workflows, or the verification process, please contact your Quad/Imaging Sales Representative.

• The basis weight and type of paper stock to be used in the final printed piece will directly affect the amount of UCR at the separation stage. UCR is expressed and checked in the final file as total area coverage, which is the sum of the four dot percentages measured in the same spot of the densest part of the separation and larger than the size of a quarter.

Image Compression

Compressed images have advantages; they require less storage space, and when minimum compression is used, there is no loss of detail, color shifting or visible blocks.

The degree of acceptable image compression used by customers is subjective and varies by the specific workflow and its requirements. We advocate testing the image format you wish to use before adopting compressed images into your workflow.

The initial format for many digital cameras is JPEG, which can be saved directly from Adobe Photoshop™. However, due to a high degree of initial compression and data loss, this is not the best file format to use when capturing digital images.

Network Options

• **Internet:** Quad/Graphics maintains multiple DS3 lines to the Internet for Internet-based FTP or Quad/Disk transfers, and client Smartool access. Quad/Net is an AFP share accessible through the Internet. NOTE: Connection speeds on the Internet can vary.

• **WAM!NET:** Send files via WAM!NET digital data network (NetCo must turn on the connection addressing).

• **Custom T1 or DS3 (scalable to volume):** Connect directly to the Quad/Net or have a connection established between your network and ours. Please note that connections of this nature will require lead times ranging from 30 to 90 days, depending on design and availability.

Non-Network File Transfer

If you do not use one of the network file transfer options described above, Quad/Imaging accepts files on CD-ROM and DVD.

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