ACMP Digital Guidelines

The ACMP (Australian Commercial & Media Photographers) have established the following guidelines to help photographers delivering digital files. Each point is explained in more detail on the pages following.

CRITICAL PARAMETERS

1. ICC colour-managed environment.

2. Capture digital images in camera's RAW format.

3. Calibrate your monitor(s) regularly with a hardware device to the D65 standard and Gamma 2.2. This is becoming a worldwide standard.

4. For Prepress use
   a. Colour space: Adobe RGB (1998) embedded in final image.

   b. File format: TIFF uncompressed in Windows byte order, or JPEG at level 12 compression, @ 300 PPI (DPI).

5. Deliver files on CD burned to ISO 9660.

RECOMMENDED PARAMETERS

6. For Web use
   a. Colour space: sRGB embedded in final image.
   b. File format: JPEG.

7. Converting to CMYK
   a. **CAUTION**: Only convert files to CMYK when a profile or full press specifications are supplied by the client, and no further retouching is required.
   b. File format: TIFF uncompressed in Windows byte order, or JPEG at level 12 compression, @ 300 PPI (DPI). Sized to final art with final sharpening.

8. Make sure the client is viewing the files on a monitor profiled to the international standard D65.

9. Embed copyright & usage into the file (IPTC) viewable in Photoshop File Info.

10. Provide a ReadMe file with images outlining specifications and disclaimer.

DETAILS OF ITEMS LISTED ABOVE

1) The ICC (International Color Consortium) specifies international standards for colour management. Photographers who supply digital files for publishing need to be in an ICC managed environment, as do their clients. Your cameras, operating system, software, and output devices all need to be setup for an ICC managed workflow. A detailed description of the ICC workflow is beyond the scope of this guide.

2) Most professional digital cameras and backs allow users to record images in a RAW format. A RAW file is essentially a record of the data captured from the camera's imaging sensor without any in-camera processing. By capturing in RAW you begin with the highest quality file with the most options / flexibility / quality for postproduction.

Presently RAW formats are proprietary to each camera/back manufacturer and require processing to a common format such as JPEG or TIFF. There are several RAW converters including Photoshop CS2, PhaseOne C1DSLR, Bibble, as well as each camera manufacturers own proprietary software.

It is important to note that RAW files are not colour managed in any way. While these files may appear to contain profiled information, colour management strategies and profiles only commence *during* the conversion from RAW to TIFF or JPG. The RAW workflow is beyond the scope of this guideline; a fuller understanding may be gleaned from "Camera RAW with Adobe Photoshop CS" by Bruce Fraser.

3) Professional photographers need to invest in a quality hardware monitor calibration device such as supplied by Gretag Macbeth (www.gretagmacbeth.com) or ColorVision (www.colorvision.com). The human eye and Adobe Gamma (a part of Photoshop) do not permit calibration with high enough precision for professional use. A CRT monitor's colour drifts over time and should be recalibrated at least monthly, allowing a minimum 30 minutes warm-up subsequent to switch on. LCD panels do not drift as much, however their accuracy should also be verified monthly.

In the past prepress would recommend a Mac use D50 and Gamma 1.8 to match the Apple Laserwriter. Today D65 and Gamma 2.2 are becoming the common standard for both PC and Mac. If you wish to supply proof prints, you will need to extend similar calibration procedures to your printer and print viewing area.

4) Adobe RGB (1998) is a commonly used industry-standard colour profile supplied with Adobe Photoshop. sRGB does not have a wide enough colour gamut and clips some CMYK colours. Adobe colour profiles can be downloaded free from:
Mac: www.adobe.com/support/downloads/product.jsp?product=62&platform=Macintosh
Windows: www.adobe.com/support/downloads/product.jsp?product=62&platform=Windows

Tagged Image File Format (TIFF) is the preferred file format. When saving tiffs in Photoshop you are given options for compression and byte order. For maximum compatibility, TIFFs should be saved with 8-bit, uncompressed options in Windows byte-order. Tiffs can also be supplied in 16 bit which doubles the file size but allows for more aggressive tonal editing. To capture 16 bit images may require shooting in the cameras' raw format, sometimes referred to as a digital negative. Images can also be delivered in JPEG file format saved at maximum quality (level 12 compression in Photoshop).

Ensure files saved on a Macintosh computer have a three letter file extension corresponding to their file type, e.g. TIF or JPG.

Sharpening is best done in stages. A `light', initial sharpen is often performed on an image to overcome the softness inherited from capture devices such as digital cameras and scanners. Final sharpening should only be performed after all editing and resizing etc has been completed. As most clients will resize images in the final stages of production, final sharpening is best left to them.

5) CD is the preferred method of delivery as many people do not have DVD drives and as yet there is no universal standard. Write CDs using the ISO 9660 format to maintain compatibility across platforms. Close CD sessions so no more data can be written. A relaxed ISO 9660 standard is also common but check with your client. Label the CD with a meaningful title that the computer can pick up and display.

For archival purposes we recommend marking CDs only with pens that are designed for the purpose. The safest place to write on a CD is on the small clear hub. Adhesive paper labels should be avoided as they could come loose in a CD drive, and may also cause a CD to become unbalanced and unreadable.

6) For internet use sRGB is the standard colour space, although the most common web browsers are not colour managed. Colour profiles and other metadata add to file size and may not be useful for web use.

7) Every digital camera & scanner is a RGB (Red, Green, Blue) device, so without exception all images start off as RGB Most printing processes use CMYK (Cyan, Magenta, Yellow, Black) inks (sometimes adding additional ink colours). This means somewhere in the imaging chain there will need to be a RGB to CMYK conversion. There are many ways to perform this conversion, but only one way to do it correctly.

CMYK conversion usually occurs at the end of the workflow and is device dependent. Each press / inkset / media combination has different characteristics requiring a specific colour conversion / ICC profile. There is no such thing as a "Generic CMYK" colour space. Do NOT convert from RGB to CMYK until you know which device/process you are printing to & which CMYK conversion / profile to use. As CMYK colour spaces are much smaller than RGB, for maximum quality all editing should be done in RGB before the CMYK conversion.

CMYK conversion is an art unto itself and is beyond the scope of these guidelines. Photographers supplying CMYK need to be aware of any liability they expose themselves to and should include a disclaimer (see point [10]). As with RGB delivery, for maximum compatibility CMYK TIFFs or JPEGs should saved as 8-bit, uncompressed and in Windows byte order.

8) Make sure the client is viewing the files on a calibrated monitor profiled to the international standard D65. Anyone anywhere in the world, viewing a monitor correctly profiled to ICC standards will view the image(s) correctly, as the author desired.

9) IPTC (International Press Telecommunications Council) has established standards for metadata attached to files describing what the file is. It can include information about copyright, photographer (author), date, captions and more. Most important to photographers is copyright, and usage - which may be entered into the 'caption' or 'special instructions' fields. Several applications can write metadata including Adobe Photoshop. IPTC information is viewable in Photoshop under File -> File Info.

10) A ReadMe file, preferably in PDF or HTML format, contains information about the images on the CD. It may include your usage agreement, copyright and a disclaimer such as:

1. On this CD you will find "our product".
2. Our product is an ICC colour-managed RGB file with the Adobe RGB (1998) colour profile embedded in the file.
3. All image editing was done on a monitor profiled to the international standard D65. Conformance to this standard was achieved with a measuring instrument. Any monitor that is correctly profiled to ICC (International Color Consortium) standards will view the image(s) correctly, as the author desired.
4. Any prints supplied with the CD should be used as a guide only. They are intended for identifying files, assessing expressions, composition, etc and not for evaluating colour accuracy. They are NOT contract proofs unless identified as such.
5. All files on this CD should be scanned for viruses, file integrity verified then backed up. We will not be held liable for any loss.

DISCLAIMER

This information is supplied in good faith as a generic guide. No legal liability is assumed for the suitability of this information to your specific needs. All recommendations should be tested in your own work environment. We recommend you have any disclaimer(s) checked by your legal expert and consult a digital colour expert for advanced advice.

ERRORS

Please report any errors or suggestions to digitalguide@acmp.com.au

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