

---

---

**Photography — Archiving systems —**  
**Part 1:**  
**Best practices for digital image**  
**capture of cultural heritage material**

*Photographie — Systèmes d'archivage —*

*Partie 1: Meilleures pratiques pour la capture d'images numériques  
du matériel de patrimoine culturel*



Reference number  
ISO/TR 19263-1:2017(E)

© ISO 2017

digital camera/copystand configuration may need to be monitored more closely to verify illumination uniformity.

A scheduled system analysis gives program managers understanding of the most important image quality criteria.

## 7 Technical metadata for image quality analysis

When scanners and cameras create image files, they also generate a range of technical metadata about the image. Most systems write such metadata according to the Exif standard<sup>1)</sup>. In common image formats, such as JPEG, TIFF, and JP2000, the technical metadata are embedded in the file header, whereas for RAW formats the technical metadata can be written to a separate file (sidecar) or embedded as XMP data in the case of a DNG (Adobe Digital Negative) format image.

The technical metadata enables successive programs to process and render the images correctly. In addition, the technical metadata are useful for image quality analysis and control. Some image quality analysis programs compare the claimed sampling rate, which is written in the technical metadata, to the measured (obtained) sampling rate and calculate the difference to verify if it is within given tolerances. As for image quality assurance it is recommended to save the following technical metadata together with the results of the image quality analysis:

- date and time (when the test image was captured);
- creator (name/id of operator);
- imaging device (manufacturer and model);
- imaging software (name and version);
  - camera settings (if applicable):
    - aperture;
    - shutter speed;
    - ISO (sensitivity/speed);
  - image data:
    - image width and image height;
    - resolution (claimed sampling rate);
    - bits per sample (bit depth);
    - colour space;
    - colour profile.

The results of the image quality analysis may be embedded in the image test file together with the technical metadata and saved for future reference. The metadata and the results may also be exported to a spreadsheet or a database for a more effective monitoring of imaging system performance<sup>1</sup>.

---

1) Exchangeable image file format for digital still cameras, Exif Version 2.3, Standard of the Camera and Imaging Products Association (CIPA), Revised 2012, [http://www.cipa.jp/std/documents/e/DC-008-2012\\_E.pdf](http://www.cipa.jp/std/documents/e/DC-008-2012_E.pdf) ExifTool is a useful application for reading, writing and editing embedded metadata, <http://www.sno.phy.queensu.ca/~phil/exiftool/>