

## TEXT FILES

Format	Description / Properties	Usage and Archival Recommendations
<b>.txt</b>	Text file Simple plain text document Compatible across software packages Supports very little formatting	Good for extremely simple files Commonly used for introductory “Read me” files containing basic information on project archives
<b>.doc</b>	Microsoft Word document ( - 2003) Proprietary binary format Can be read by OpenOffice Easily converted into PDF format	Accepted for archiving because it is so widely used However, will become obsolete
<b>.docx</b>	Microsoft Word document (2007 - ) Human readable XML format Stored along with embedded content as zipped file	Good for dissemination and preservation Conversion to .doc file to open with earlier versions of MS Word
<b>.rtf</b>	Rich Text Format (Microsoft) Tagged plain text format	Formatting issues when using opened in different software Large file sizes mean that .docx or .odt file formats are preferred
<b>.odt</b>	Open Document Text (OpenOffice) ISO standard, human readable XML format	Open source format good for use, dissemination and archiving Archive files in uncompressed form Can open .doc files Might not open correctly in other word processing programs
<b>.pdf</b>	Portable Document Format (Adobe) Proprietary binary format Aims to retain document formatting Can store embedded data: raster and vector images (e.g. Adobe Illustrator files)	Highly suitable for dissemination PDF creators and readers freely and widely available Retain original text document and embedded objects (e.g. images, tabular data, etc)
<b>PDF/A</b>	Portable Document Format / Archive (Adobe) Open ISO standard format for long-term archiving Formatting data self-contained in file	Widely accepted as viable format for long-term archiving Retain original text file and embedded objects separately (e.g. images, tabular data, etc)

## IMAGE FILES

### The most useful/common formats

Format	Description / Properties	Archive Recommendations
.tif / .tiff	Tagged Image File Format (Adobe) Uncompressed image format. Can support range of metadata: EXIF, GeoTIFF for georeferencing	Uncompressed Baseline TIFF Version 6 standard format for long term preservation of digital figures
.jpg / .jpeg	Joint Photographic Expert Group ISO standard 32-bit colour depth with extremely efficient lossy compression of image Compression creates 'visible artefacts' around complex high-contrast image areas (e.g. text) Supports EXIF and IPTC metadata	While unsuitable for long-term storage, accepted format for archiving digital photographs Designed for photographic or painted images with smooth varying tones that do not have sharp contrast Much smaller file sizes than PNG or TIFF Superseded by lossless compression JPEG2000
.jp2 / .jpx	JPEG2000 ISO standard intended to replace .jpeg Higher performance and lossless compression JPX format use XML to store metadata, and supports IPTC and Dublin Core metadata, but not EXIF	JPEG2000 will probably become popular format use and long term preservation However, not yet supported by internet browsers, nor taken up by digital camera manufacturers
.png	Portable Network Graphics. ISO standard Lossless compression with 32-bit colour depth, and Alpha channel (transparency), with few 'visible artefacts' (cf. jpegs) Does not support EXIF metadata	Designed for internet and uses RGB colour space Standard format for lossless presentation. Use instead of GIF format Some data centres do NOT recommended for PNG long term storage (use TIFF). NOT recommended for digital photographs, as only supports RGB colour

### Other image file formats

Format	Description / Properties	Archive Recommendations
.bmp	Bit-Mapped Graphics Format Microsoft proprietary format in older MS applications for simple graphics Limited embedding of metadata	Not recommended for either working files or long-term file storage
.cpt	Corel Photo-Paint (Corel) Proprietary format for Corel Draw software Main competitor to Adobe Commonly used for creating or editing figures	Highly specific to Corel software Files should be stored in uncompressed TIFF format
.dng	Digital Negative format (Adobe) Open and archival format for storing raw uncompressed digital photographs Can read all tagged metadata from original raw format and store in DNG file Supports input of other XMP metadata	Suitable for long-term storage of image data Store copy DNG files in parallel project archive folders Free Adobe downloadable convert to DNG files from RAW files
.gif	Graphics Interchange Format Compuserve proprietary format Lossless compression with 8-bit colour depth (256 colours) Limited embedding of metadata	Superseded by PNG format, but still widely used for still and animated Web graphics
.psd	Photoshop Document (Adobe) Proprietary format and can be used with open Photoshop Elements software Supports variety of features: image layering, transparency, text Supports IPTC, EXIF and XMP metadata	'Industry standard' for image creation Proprietary nature means limited third-party support for PSD format Limited compression results in large file size Unsuitable for long term preservation (TIFF for figures or DNG for photographic images)
.raw	Unprocessed bitmap files created by digital cameras and some scanners Proprietary and require specific software No standardisation in file formats	If possible, convert raw files to DNG format for long-term preservation

## IMAGE CREATION AND CAPTURE

Image Capture	Format options	Archive Recommendations
Digital Cameras	Dependent on model of camera	<ol style="list-style-type: none"><li>1. Raw DNG (or TIFF) file if possible</li><li>2. Original JPEG: save archive copy on download and for presentation images always work on a copy of the file</li></ol>
Scanners	Wide range once scanned	Save uncompressed/lossless format (TIFF) as archive copy regardless of intended format
Graphics Images	Wide choice of formats under 'Save As...' command	Alongside software package files (e.g Photoshop [.psd], Corel Draw [.cpt]), save draft images in uncompressed TIFF format if possible, and replace with archive TIFF of end product image

## VIDEO AND AUDIO FILES

Format	Notes
.wav	<b>Waveform Audio (Microsoft)</b> Uncompressed file Recommended for long term preservation
.aif	<b>Audio Interchange File (Apple)</b> Uncompressed file Recommended for long term preservation
.mp3	MPEG1, 2 Audio Layer 3 (Moving Picture Expert Group: Audio group) Patented ISO standard compressed format
.rm / .ram	RealAudio file format used for streaming radio over the internet
.wma	Windows Media Audio Compressed file used by Windows
.ogg	Open standard format for compressed audio files
.avi	Audio Video Interleave (Microsoft)
.wmv	Windows Media Video (Microsoft) Proprietary compression format for hard media delivery (DVD, Blu-Ray)
.mov	QuickTime File Format (Apple)
.mp4	<b>MPEG4 – Digital Video File Format</b> ISO standard Recommended by DSpace for long term storage