Formats Supported by the DRS

Still Image Formats

Content	Preference	Format	Format Use		Notes
			Preservation	Delivery	
Still Image	Preferred (in order of preference)	TIFF uncompressed in any color space supported by TIFF	X		TIFF has been commonly used at Harvard for digital master images, and is considered an archival format suitable for long-term preservation. For more information about the TIFF format see Adobe's TIFF resources
		JPEG 2000 JP2 profile with lossless compression	X	X	Some projects depositing content into the DRS have chosen to use JPEG 2000 for digital master images instead of TIFF. JPEG 2000 can offer storage savings - file sizes tend to be smaller and there is an opportunity to use the same file as the preservation and use copy. While JPEG 2000 is becoming more acceptable in the library community as a preservation format, there are still advantages to TIFF over JPEG 2000 for preservation. TIFF uncompressed is a simpler format internally and has more general tool support. For more information about JPEG 2000 see the JPEG 2000 website; delivered by Image Delivery Service (IDS)
		TIFF with CCITT T.6 (Group 4) compression	X		
		JPEG 2000 JP2 profile with lossy compression	X	X	Delivered by Image Delivery Service (IDS)
		JPEG JFIF; TIFF with associated alpha component; TIFF with PackBits (lossless), LZW (lossless), Modified Huffman or Group 3 Fax compression	X	X	Delivered by Image Delivery Service (IDS)
		GIF	X	X	Delivered by Image Delivery Service (IDS)
	Accepted	JPEG (non-JFIF)	X	X	(suggested alternative: TIFF uncompressed or JPEG 2000 JP2 profile with lossless compression); delivered by Image Delivery Service (IDS)
		TIFF with JPEG (lossy) compression	X		(suggested alternative: TIFF uncompressed or JPEG 2000 JP2 profile with lossless compression)

Video Formats

Harvard Library Media Preservation Services will provide reformatting services to produce these formats.*

Content	Preference	Format	Format Use		Notes
			Preservation	Delivery	
Video	Preferred	Codec: JPEG 2000* Wrapper: QuickTime, MXF (MXF OP1a, OP1b operational patterns or AS-07)	X		Recommend lossless compression
		Codec: Uncompressed* Wrapper: QuickTime	X		8 bit or 10 bit
		Codec: DV* Wrapper: QuickTime	X		For digitized DV tape

		Codec: MPEG-2 Wrapper: QuickTime	X		
		Codec: H.264* Wrapper: QuickTime		X	Any of the 21 different profiles; delivered by Streaming Delivery Service (SDS)
	Accepted	Codec: Avid DNxHD* Wrapper: QuickTime, MXF (MXF OP1a, OP1b operational patterns or AS-07)	X		
		Codec: Apple ProRes* Wrapper: QuickTime	X		

Disk Image Formats

Content	Preference	Format	Format Use		Notes
			Preservation	Delivery	
Disk Image	Preferred	RAW (IMG,DD)	X		Often disk image formats are split into smaller files that are stitched together in sequence, often in 2GB chunks. When this occurs, many systems use sequential file extension numbering to delineate the relationships, e.g., myimage.001, myimage.002, myimage.003; or yourimage.e01, yourimage.e02, yourimage.e03. When this occurs, it is imperative that original filenames AND extensions be preserved so that they can be re-instantiated upon delivery to an end user (otherwise it will not be possible to put the sequence back together in the proper order).
		ISO	X		There are possibilities that some ISO files are merely RAW files that contain ISO file systems within them. Some ISO files may be pure copies of ISO file systems.
		BIN/CUE	X		Often disk image formats are split into smaller files that are stitched together in sequence, often in 2GB chunks. When this occurs, many systems use sequential file extension numbering to delineate the relationships, e.g., myimage.001, myimage.002, myimage.003; or yourimage.e01, yourimage.e02, yourimage.e03. When this occurs, it is imperitave that original filenames AND extensions be preserved so that they can be re-instantiated upon delivery to an end user (otherwise it will not be possible to put the sequence back together in the proper order). Only .BIN files (and sometimes .ISO files) include sidecare .CUE files. The .CUE files serve as metadata for understanding the type and composition of data stored in the .BIN (or .ISO) file.
		EWF-E01 (EWCF-ASR02)	X		Often disk image formats are split into smaller files that are stitched together in sequence, often in 2GB chunks. When this occurs, many systems use sequential file extension numbering to delineate the relationships, e.g., myimage.001, myimage.002, myimage.003; or yourimage.e01, yourimage.e02, yourimage.e03. When this occurs, it is imperitave that original filenames AND extensions be preserved so that they can be re-instantiated upon delivery to an end user (otherwise it will not be possible to put the sequence back together in the proper order).

CAD Formats

Deposit the native CAD file together with a derivative PDF and make both deliverable. The PDF provides an alternative “fixed” preservation copy, providing mitigation for future obsolescence/rendering risks; while the native CAD file provides a truer version of the original, for users who are able to still read the format.

Content	Preference	Format	Format Use		Notes
			Preservation	Delivery	
2D CAD Drawing	Preferred	Portable Document Format (PDF)	X	X	embed fonts and linked files; delivered by File Delivery Service (FDS)
		AutoCAD Drawing (DWG)	X	X	embed fonts and linked files; delivered by File Delivery Service (FDS)
		Drawing Interchange Format (AutoCAD DXF)	X	X	embed fonts and linked files; delivered by File Delivery Service (FDS)
3D CAD Drawing	Preferred	Portable Document Format (PDF)	X	X	embed fonts and linked files and embedded 3D content in U3D or PRC format; delivered by File Delivery Service (FDS)
		AutoCAD Drawing (DWG)	X	X	embed fonts and linked files; delivered by File Delivery Service (FDS)

		Drawing Interchange Format (AutoCAD DXF)	X	X	embed fonts and linked files; delivered by File Delivery Service (FDS)
		Extensible 3D Graphics (X3D)	X	X	prefer xml encoding to binary or vrml; delivered by File Delivery Service (FDS)

Audio Formats

Content	Preference	Format	Format Use		Notes
			Preservation	Delivery	
Audio	Preferred	Waveform Audio (WAV)	X		
		MPEG-4 Audio (MP4)	X		
		MPEG 1/2 Audio Layer 3 (MP3)		X	Delivered by Streaming Delivery Service (SDS)
	Accepted	Audio Interchange File Format (AIFF)	X		
		RealAudio		X	Delivered by Streaming Delivery Service (SDS)

Word Processing Formats

Deposit the native word processing file together with a derivative PDF (PDF/A if possible) and make both deliverable. The PDF provides an alternative “fixed” preservation copy, providing mitigation for future obsolescence/rendering risks; while the native word processing file provides a truer version of the original, for users who are able to still read the format.

Documents should not have DRM, including passwords or encryption.

Content	Preference	Format	Format Use		Notes
			Preservation	Delivery	
Word Processing	Preferred	Portable Document Format (PDF), PDF/A or PDF/X	X	X	Delivered by File Delivery Service (FDS)
		Microsoft Word Binary File Format (DOC)	X	X	Delivered by File Delivery Service (FDS)
		Office Open XML Document (DOCX)	X	X	Delivered by File Delivery Service (FDS)
		Rich Text Format (RTF)	X	X	Delivered by File Delivery Service (FDS)
		WordPerfect Document (WPD)	X	X	Delivered by File Delivery Service (FDS)