



Archaeology
Data Service

Introduction to Digital Preservation

TNA Training School

13th November 2024

Olivia Foster

Introduction to Digital Preservation

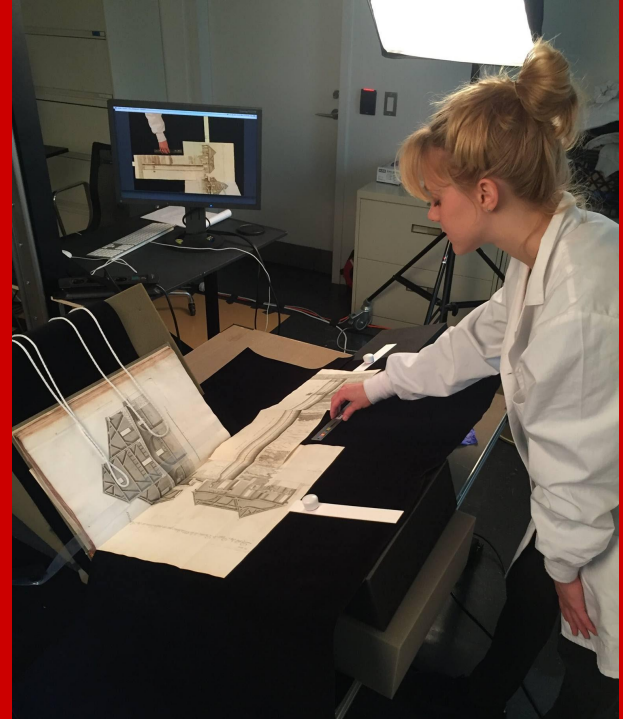
- Why is digital data at risk?
- What is digital preservation?
 - Digital preservation activities
 - Digital preservation strategies
- A case study of the loss of digital data



Risks to physical archival material

- Loss of records
- Physical and chemical deterioration
- Dissociation of material and/or inadequate documentation

<https://www.si.edu/newsdesk/factsheets/digitization-smithsonian-collections>



Is digitisation the solution?

Why is Digital Data at Risk?

- Depends on technology to access
- Inadequate documentation
- Risk of data loss
- Obsolescence of:
 - Media
 - Hardware
 - Software



<https://angrysicsops.com/2022/02/25/do-not-erase/>

Obsolesce of Storage Media, Software and Formats

- Technology changes over time, creating barriers to access and reuse.
- Accessibility of software or file formats often require documentation to use and understand them.



If it is adequately preserved, there are many benefits to digital data, in particular the ability to make content more accessible to users.





Digitisation

≠



Digital Preservation

Data creation / acquisition

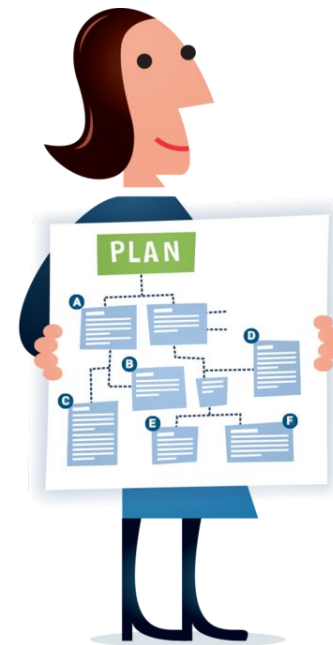
Digital Preservation Policy: Selection and retention

- Not everything may need to be preserved
- Copyright, sensitive data and GDPR
- Financial and environmental cost of storing digital data

Digitisation

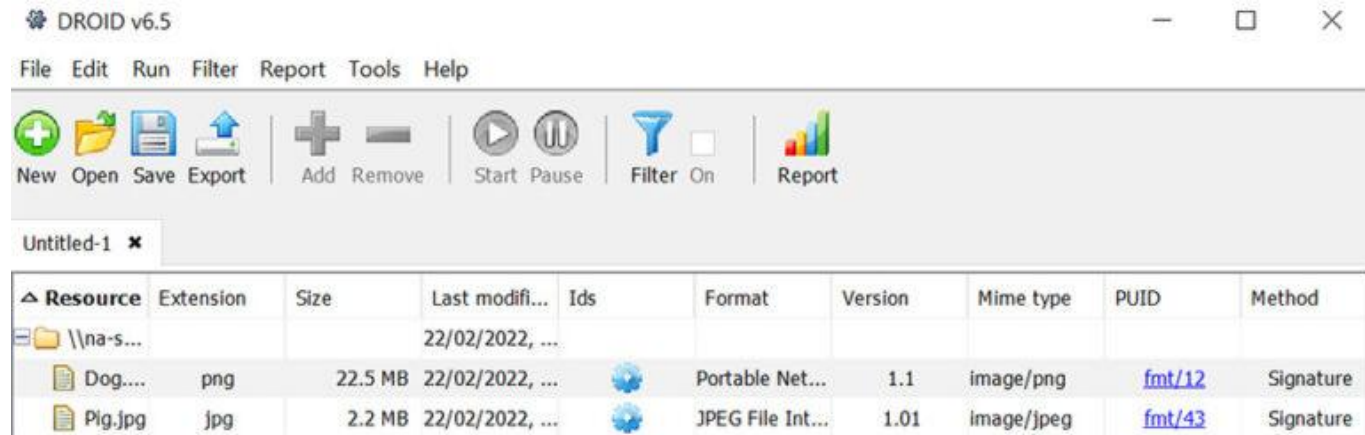
Digital data

Digital preservation activities



Digital Preservation Activities: Appraisal

DROID (Digital Record Object Identification) - a software tool developed by The National Archives to perform automated batch identification of file formats



The screenshot shows the DROID v6.5 application window. The title bar reads "DROID v6.5". The menu bar includes "File", "Edit", "Run", "Filter", "Report", "Tools", and "Help". The toolbar contains icons for "New", "Open", "Save", "Export", "Add", "Remove", "Start", "Pause", "Filter", "On", and "Report". The main area displays a table with the following data:

Resource	Extension	Size	Last modified	Ids	Format	Version	Mime type	PUID	Method
<ul style="list-style-type: none"> \\na-s... Dog... (png, 22.5 MB, 22/02/2022, ...) Pig.jpg (jpg, 2.2 MB, 22/02/2022, ...) 									

Digital Preservation Activities: Preservation actions

- **Replication** of files (creating back-ups)
- **Normalisation or Migration** of files to different formats
- **Emulation** – re-creating the original operating environment.

Preserving content vs preserving look and feel of a resource



<https://megadrive-emulator.com/platform-game/sonic-the-hedgehog>

Digital Preservation Activities: Creating documentation

- File level metadata
- Collection level ('discovery') metadata
- Using controlled vocabularies (e.g Wikidata)
- Documenting preservation actions



Main page
Community portal
Project chat
Create a new item
Recent changes
Random item
Query Service
Nearby
Help
Donate

Lexicographical data
Create a new Lexeme
Recent changes
Random Lexeme

Tools
What links here
Related changes
Special pages
Permanent link
Page information
Concept URI
Cite this page
Get shortened URL
Download QR code

Item [Discussion](#) [Read](#) [View history](#)

Amelia Edwards (Q437356)

English novelist, journalist, traveller and egyptologist
Amelia Ann Blandford Edwards | Amelia B. Edwards | Amelia (Ann) Blandford Edwards

In more languages
Configure

Language	Label	Description	Also known as
English	Amelia Edwards	English novelist, journalist, traveller and egyptologist	Amelia Ann Blandford Edwards Amelia B. Edwards Amelia (Ann) Blandford Edwards
French	Amelia Edwards	égyptologue, romancière, nouvelliste et journaliste britannique	Amelia Ann Blandford Edwards
German	Amelia Edwards	britische Schriftstellerin und Mitbegründerin des Egypt Exploration Fund	Amelia B. Edwards Amelia Ann Blandford Edwards Amelia Ann Blandford
Spanish	Amelia Edwards	novelista, periodista, egiptóloga y viajera inglesa	Amelia Ann Blandford Edwards Amelia Ann Blandford Edwards

All entered languages

Statements

instance of human [edit](#)

+ 1 reference


stated in BrF authorities

retrieved 10 October 2015

reference URL http://data.bnf.fr/ark:/12148/ob12184461j

[+ add reference](#)

[+ add value](#)

image  [edit](#)

<https://www.wikidata.org/wiki/Q437356>

Object Id	Caption	Object Representation	Subject Keyword	Period	Period Dates	Creator	Location	Location Coordinates / Extent	Creation Date
2282009	North-east facing shot of deposits (5) and (3) (1m scale)	USH22_282.jpg USH22_282.jpg USH22_282.tif	Watching Brief Archaeological Investigation Deposit	Other: 19th Century Other: 20th Century Other: 21st Century	1800, 2022	Archaeological Research Services Ltd	Other: 76 Union Street Other: Harthill	Type: OSGB, Easting: 449381, Northing: 380700	10-Oct-2022

Digital Preservation Activities: Publishing data

ads Archaeology Data Service

Search data **ADD-EASY** Deposit data Help & guidance News & events Blog About

[BACK TO ARCHIVES SEARCH](#)

Digital Archive from Sabratha Excavations: The Kathleen Kenyon and John Ward-Perkins Collection, 1948-1951

The British Institute for Libyan and Northern African Studies (BILNAS), 2024.
<https://doi.org/10.5284/1122174>. [How to cite using this DOI](#).

Explore this collection:

- Introduction
- Downloads**
- Collection Metadata
- Usage Statistics










The British Institute for
Libyan and Northern
African Studies Digital
Archive

Downloads

[BACK TO DOWNLOADS](#)

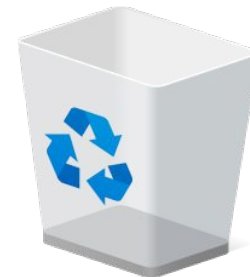
Photographs

Files

	Photograph of Insula 10, Regio II, Sabratha.
Filename	D5_12_1_1_1_1s01.jpg (2 MB)
Description	Wide-angle photograph of Regio II, Insula 10.
	 Info Download
	Photograph of unspecified trench or wall at House G, Insula 10, Regio II, Sabratha.
Filename	D5_12_1_1_1_2s01.jpg (2 MB)
	 Info Download
	Close-up photograph of part of Mosaic 2 at Casa Brogan, Sabratha.
Filename	D5_12_1_1_1_3s01.jpg (2 MB)
	 Info Download
	Photograph shows PH27, Wall 42, House G, Insula 10, Regio II, Sabratha.
Filename	D5_12_1_1_1_4s01.jpg (2 MB)
	 Info Download
	Photograph shows Trench P. H 101. Wall 29 at Casa Brogan, Sabratha.

- Ensuring data is findable on our website
- Providing data to download in an accessible way
- Creating persistent identifiers (DOI: Digital Object Identifier)

The British Institute for Libyan and Northern African Studies (BILNAS) (2024) *Digital Archive from Sabratha Excavations: The Kathleen Kenyon and John Ward-Perkins Collection, 1948-1951* [data-set]. York: Archaeology Data Service [distributor] <https://doi.org/10.5284/1122174>



Digital Preservation Activities: Data disposal?

- Retention periods: Does everything need to be preserved forever?
- Sensitive data and GDPR
- Embargoed or restricted access to datasets

Council for British Research in the Levant Research Reports

Council for British Research in the Levant, 2019. (updated 2022) <https://doi.org/10.5284/1053684>. [How to cite using this DOI](#)

[Introduction](#)
[Metadata](#)
[Usage Statistics](#)

Data copyright © Council for British Research in the Levant unless otherwise stated

This work is licensed under a Creative Commons Attribution 4.0 International License.

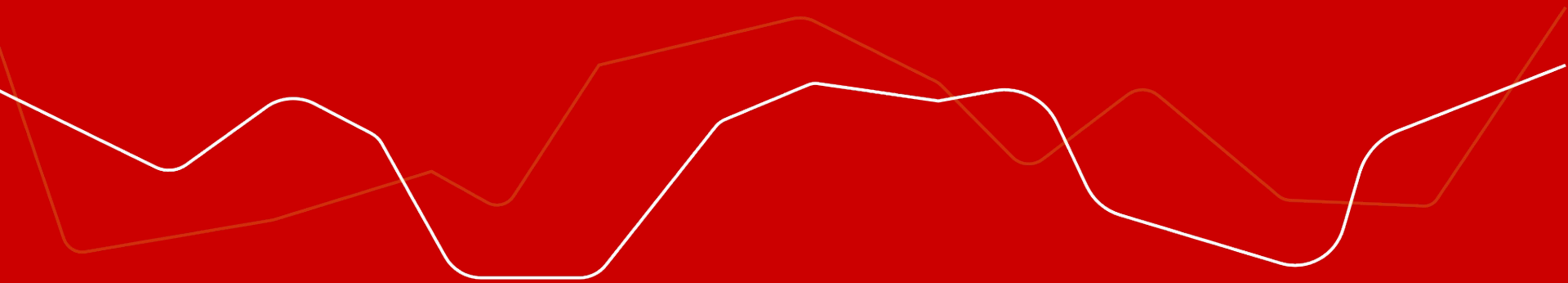


This is a landing page for doi:10.5284/1053684 (ADS archive arch-3514-1)

This dataset has been deaccessioned at the request of the depositor. The ADS has no files to download for this collection

For more information on CBRL publications, please visit the [Council for British Research in the Levant Website](#).

Digital preservation is an **active process** of data management, appraisal and curation.

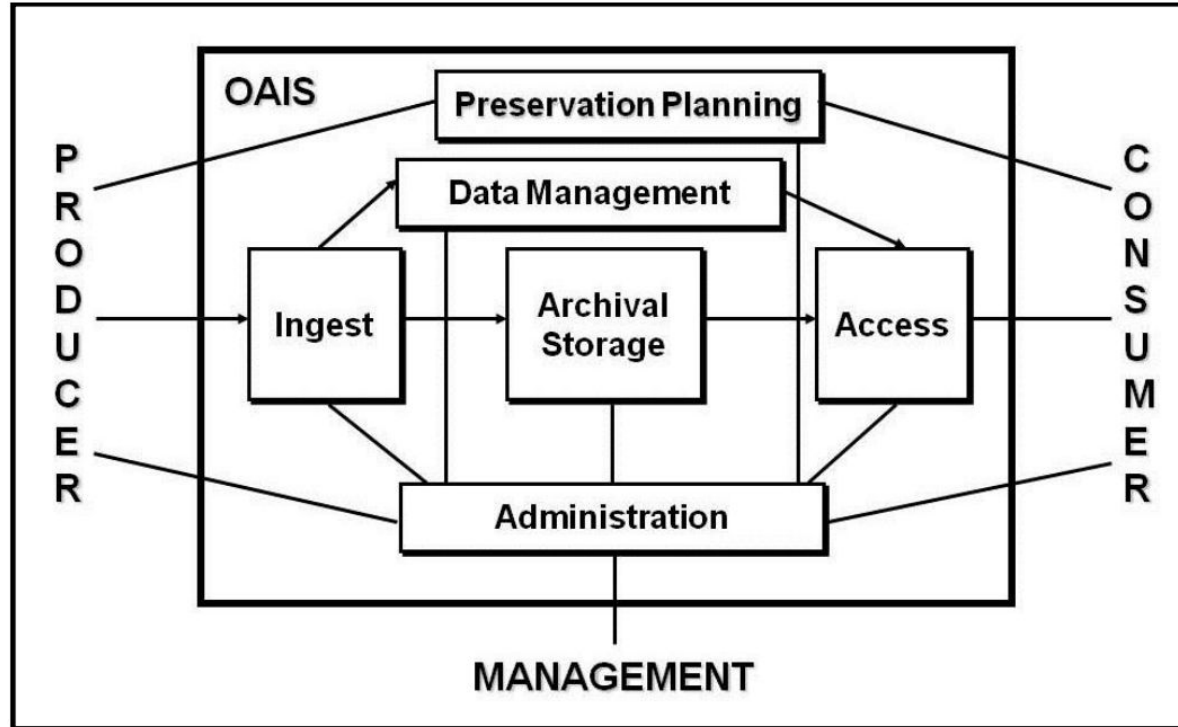


Digital Preservation Models

Three Legged Stool:

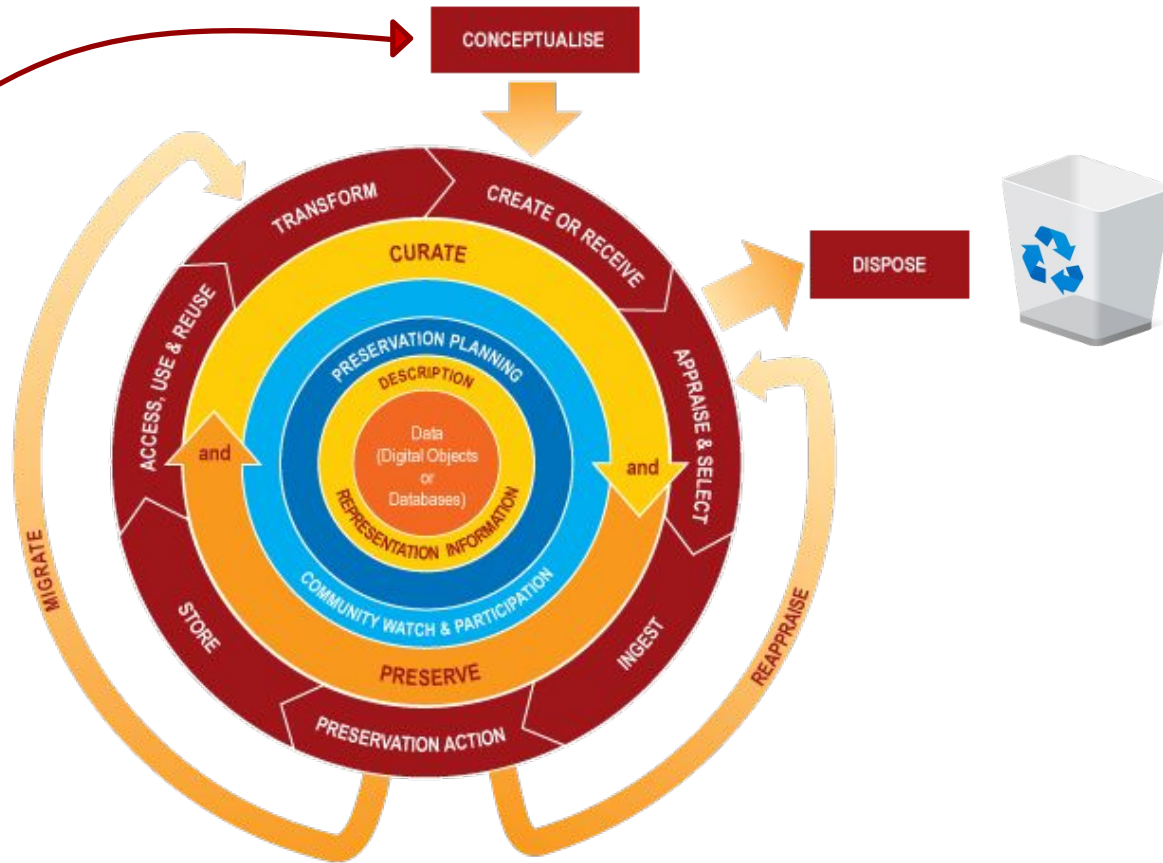
- Technology (tools, security, storage and Back-Up)
- Organisation (policy, strategy, procedures, staffing)
- Resources (business planning, cost modelling and funding)





Open Archival Information System (OAIS) Model

Data creation,
e.g. digitisation



The DCC Curation Lifecycle Model

The Newham Archive: A Case Study of the Loss of Digital Data

The Archaeological Service was closed down in 1998 and the digital archive was passed to the ADS. The digital archive represented all the work that was digitised during Newham Archaeological Service fieldwork and post-excavation analysis, along with project designs over a period of about ten years.

This archive was delivered to the ADS on 230 floppy disks containing over 6000 files and totalling over 130Mb of data.

The Newham Archive: A Case Study of the Loss of Digital Data

Issues with data:

- Data in proprietary file formats that have gone out of use
- Non-existent data or project documentation.

Resulting in:

- 10-15% of the files are inaccessible and the data the floppy disks contain are effectively lost
- A number of 'orphaned' datasets, including a large cemetery database, which have been rescued but have little reuse potential.

Although the data was considered 'archived', much of it was inaccessible

Resources:

- Introduction to digital preservation handbook by the Digital Preservation Coalition (DPC)- <https://www.dpconline.org/handbook/introduction>
- Archaeology Data Service / Digital Antiquity Guides to Good Practice - <https://guides.archaeologydataservice.ac.uk/g2gpwiki/>
- National Archives Blog - PRONOM: A database centenary (an overview of PRONOM, DROID and file format identification) - <https://blog.nationalarchives.gov.uk/pronom-a-database-centenary/>
- DROID (Digital Record Object Identification) tool developed by The National Archives - <https://www.nationalarchives.gov.uk/information-management/manage-information/policy-process/digital-continuity/file-profiling-tool-droid/>



Archaeology
Data Service

Any questions?



Archaeology Data Service

Department of Archaeology

University of York

The King's Manor

Exhibition Square

York, YO1 7EP



www.archaeologydataservice.ac.uk



help@archaeologydataservice.ac.uk