

Digital Data and Archaeology: Management, Preservation and Publishing



Digital Preservation

Archaeology Data Service
Department of Archaeology
The Kings Manor
University of York
York
YO1 7BP

Dr Katie Green
katie.green@york.ac.uk

06/04/2016

<http://archaeologydataservice.ac.uk>

1



Digital Preservation

What happens to data once its deposited?



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2



Digital Preservation

Digital Preservation

- Complex process
- Lots of time and effort required
- Standards and guidelines to follow

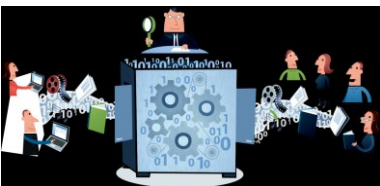


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3

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3 Methods

- The Hardware Museum
- The Software Emulator /Virtualisation
- Migration

NB much more intervention is needed than conventional archives



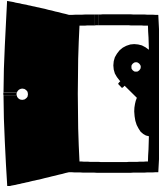
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Behind the Scenes at the ADS

- Ensure the multiple and regular backups and the renewal of storage media
 - 23 Virtual Machines
 - Tape backup at University of York
 - Deep Store – UK Data Archive
 - Five year hardware rotation strategy
- Use data migration strategies
- Follow the Open Archival Information System (OAIS) reference model



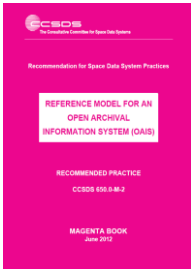
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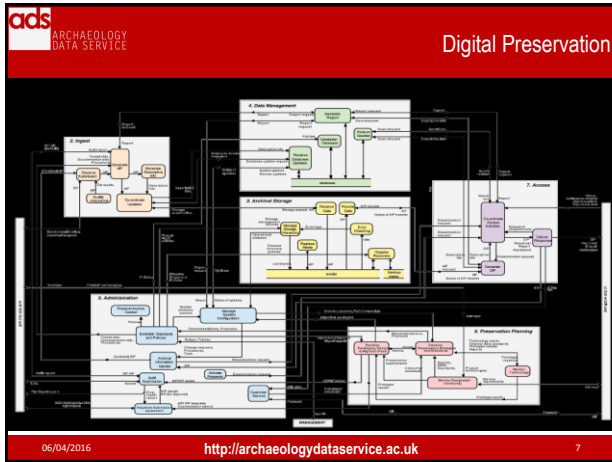
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Open Archival Information System (OAIS) reference model

- Established by the Consultative Committee for Space Data Systems (CCSDS)
- International ISO standard 14721



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- Submission Information Package (SIP):**
Original data supplied by the producer (creator or depositor) including documentation to facilitate archiving and reuse.
- Archival Information Package (AIP):**
Data generated from the SIP and the long-term Preservation package managed within the OAIS. Including administrative, technical and reuse documentation.
- Dissemination Information Package (DIP):**
Data generated from the SIP/AIP and made available to consumers (users) including documentation to facilitate use.

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Preservation and Digital Archiving

"The single most useful thing you can do to ensure the long-term preservation of your data is to plan for it to be re-used. Shipping it being reused by someone else who has never met you and who never will meet you, will leave you to approach the creation and design of your data in a new light. Otherwise, you're left with the use of data in the single worst way of handling the integrity of data and making work and projects with it. In short, always plan for re-use!" Prof. Julian Richards, Director ADS

One of the core activities of the Archaeology Data Service is the long-term digital archiving of the data that has been entrusted to us. We follow the Open Archival Information System (OAIS) reference model and also have several internal policies and procedures that guide and inform our archiving work in order to ensure that the data in our care is managed in an appropriate and consistent way.

ADS Preservation Policy (PDF) •
ADS Repository Operations (PDF) •
ADS Ingest Manual (PDF) •
Copyright Management Policy (Word docx) •
Reference Model for an Open Archival Information System (PDF) •

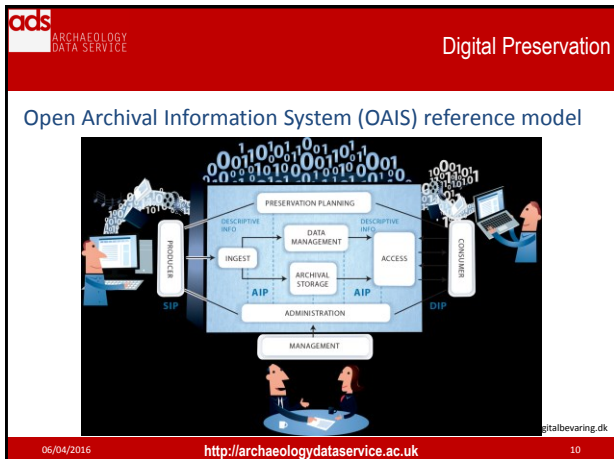
The ADS web site awarded the Data Bank of Approval (DBA) in March 2014. ADS's Data Bank of Approval was renewed in 2015 when new DBA standards were released for 2014-2017. The demonstration of the robustness and sustainability of our archival processes, further information about the DBA as well as its development with the Open Archival Information System (OAIS) guidelines can be found on the ADS web site. An article 'The Open Archival Information System (OAIS) Guidelines and the ADS' is available from the Digital Curation Centre and would be useful reading for any other archive looking at undertaking this process.

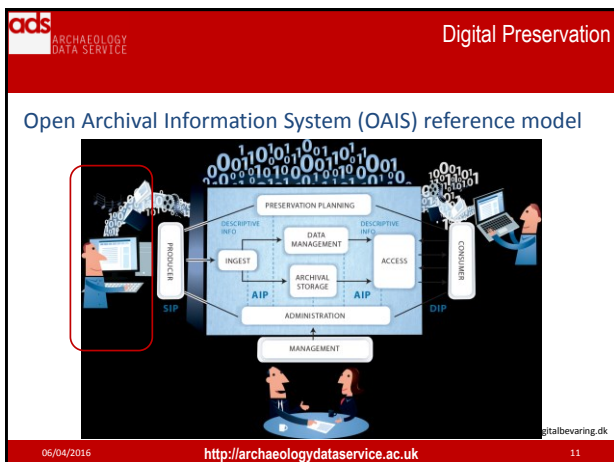
The ADS is also an associate member of the Digital Preservation Coalition (DPC) and was awarded the DPC's Decennial Award in 2012 for the most outstanding contribution to digital preservation over the last decade.

<http://archaeologydataservice.ac.uk/advice/preservation>

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Digital Preservation Standards

Deposit Evaluation

- Intellectual content & potential interest in their re-use
- Viability of data management, preservation, and distribution
- Other suitable archives?
- Authority to deposit the data
- Material is 'complete'
- Digital form in preferred file format – consult repository websites
- Sufficient project documentation and file Metadata

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Submission Information Package (SIP)

- Authenticate original version
- Replace spaces with underscores
- Log details of SIP in **Collections Management System**
- Create **checksums**
- Run **Droid** to generate file level metadata
- Store **licence** in AIP directory
- Scan paper documentation
- Acknowledge receipt of data
- Store original media



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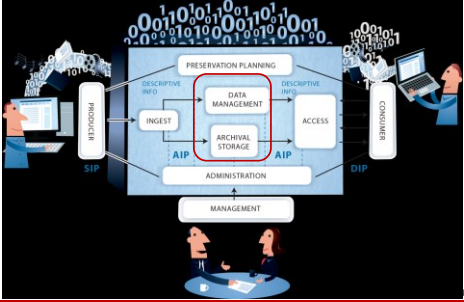
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Open Archival Information System (OAIS) reference model



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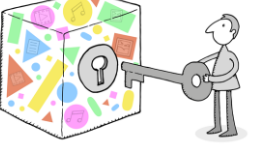
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Archival Information Package (AIP)

- Check **licence**
- Check copyright and confidentiality clearance
- **Consistency** checks
- Selecting **preservation** and **dissemination** file formats
- Develop a **conversion** plan
- **Convert** the files
- **Validate** file conversion
- **Metadata** update
- Create and store **checksums** for the AIP
- Submit AIP for checking



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Dissemination Information Package (DIP)

- Convert the files
- Validate file conversion
- Create web interface
- Allocate permanent urls / DOIs
- Pre-Release interface
- Make any depositor changes
- Release Archive
- Publicise Archive

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University-led research projects

Major infrastructure programmes

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DOIs

A Corpus of Early Anglo-Saxon Buckets

Jean Mary Cook, 2003

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Primary contact:
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Source Identifiers

ADS Collection ID: 191
 doi:10.5287/ADS191
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Introduction

When Jean Cook died in July 2001 the community of Anglo-Saxonists lost one of its greatest members. Her research on grave goods of the pagan period, specifically buckets, was a ground she began in 1983 and which she diligently pursued through a busy professional life as Museums and University administrator. It interested her interests in trading and markets and in participating in Cotenches historical and archaeological projects, still allowed her to become the first senior Secretary of the Society of Antiquaries of London. When her illness forced her to retire she turned around her whole attention to her research on buckets, intending to bring the work to a conclusion with a database and a monograph. The corpus exists and drawing up notes, together with a database plan and spreadsheet, were in his box in his study even after his death. Paul of his friends and colleagues met to discuss how the work, so close to completion, could be brought to publication. They were Dr Rita Huchingson, German archaeologist and travel historian, museum archivist and at that time Director of the University of Oxford Institute of Archaeology, Tim Cornell, archaeologist, herald and colleague many years, and Mary Hughes third and colleague in many former positions. Permission was obtained from the family to place the whole archive of the Institute of Archaeology and copyright in the archive published was also secured by the Institute. OADS prepared a detailed grant generously from the archive would be completed and published, and the plan was submitted to the Society of Antiquaries and the British Library for funding. The project was successfully following and the work began in May 2002. The Institute of Archaeology provided the office facilities and the web site tool, including an office and the necessary computer hardware.

Funding:

Maria Fitz Fund, The Society of Antiquaries of London, Institute of Archaeology, Oxford

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25



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Persistent Identifiers

Types of persistent identifiers include, Handles, Archival Resource Keys (ARKs) and Persistent URLs (PURLs), all can be resolved to an Internet location. The scheme that is gaining most traction is the Digital Object Identifier (DOI).

<http://dx.doi.org/>

resolver service

/

10.5284

prefix

(assigning body)

/

1000389

suffix

(resource)

[illegible]
