

Digital preservation goes nuclear - project highlights and future directions

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Introduction

“Reliable, Robust and Resilient Digital Infrastructure for Nuclear Decommissioning”

In November 2018 the DPC and the UK Nuclear Decommissioning Authority began a 2 year collaborative digital preservation project.

As this phase of work comes to an end we wanted to update you on how it went...

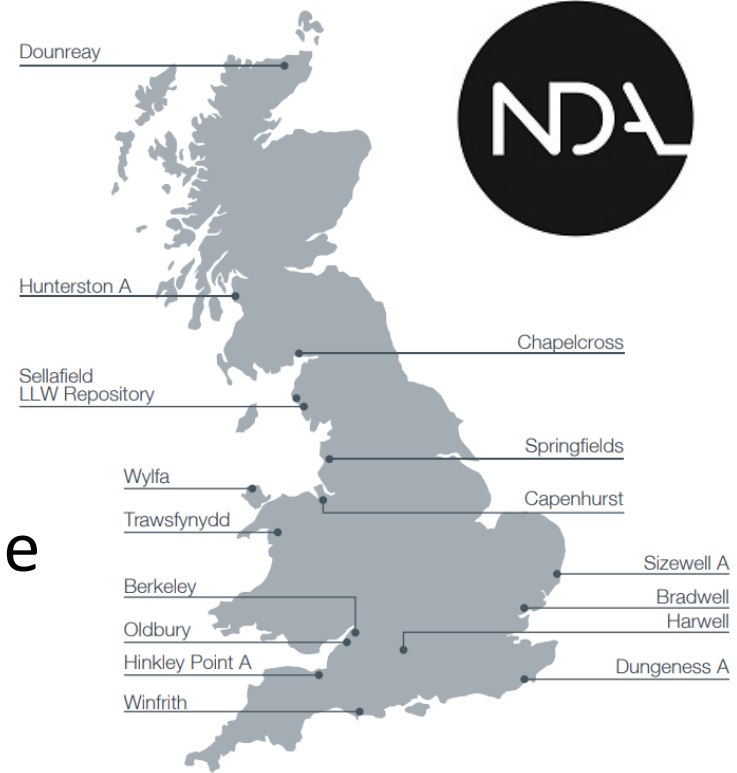


What does the NDA do?

Mission: to clean up the UK's nuclear sites safely, securely and cost-effectively with care for people and the environment.

Decommissioning and demolishing all buildings, as well as the treatment and disposal of associated waste, both radioactive and conventional.

“the largest, most important environmental restoration programme in Europe.”



In the 'before-times'...



What did we achieve?

- Assessment and benchmarking
- Digital Preservation Policy
- Digital Preservation Procedure
- Case studies
 - Preservation of radioactive waste records
 - Preservation of records from EDRMS
 - Preservation of legacy databases
 - Preservation of 3D engineering models
 - Digitization

Assessment and benchmarking

- DPC's Rapid Assessment Model (DPC RAM) was created (based on a model published by Adrian Brown)
- This gave them a means of measuring themselves and benchmarking against others
- They used RAM internally within their Information Governance Officers Group to look at each section of the NDA
- They will use it annually going forward



Digital Preservation Policy

- Key deliverable for the project
- An aspirational policy with continuous improvement at its core
- Links in with DPC RAM goals
- Builds in learnings from the Preservation Policy toolkit booksprint we ran with University of Bristol

SOON TO BE PUBLISHED...watch the DPC blog!

Digital Preservation procedure

- We have been involved in an update of a key information management document for the NDA (IMP06). To include updated advice on
 - Storage
 - File formats
 - File naming

Documents



[IMP06 Managing NDA Information: Requirements](#)

PDF, 1010KB, 67 pages

This file may not be suitable for users of assistive technology.

► [Request an accessible format.](#)

Details

It is difficult to achieve confidence in the 'quality' of information recorded by unfamiliar means many years ago by unknown operators of nuclear sites.

Digital Preservation procedure

- Set of Technology Watch Guidance Notes commissioned with further advice on specific data types:

- Databases
- Spreadsheets
- Documents
- Images
- Email
- CAD
- 3D models
- GIS
- Moving image
- Audio



Look out for these
in early 2021

Radioactive waste records

“...information about the waste may need to be retained for a very long time. It is impossible to predict the needs of or the technology available to society over such a timeframe...”

The management of higher activity radioactive waste on nuclear licensed sites – Joint Guidance, ONR, EA, SEPA, NRW (2015)

“In cases where the very long term control of documents is needed (e.g. for extended storage pending disposal), the possible evolution of language and educational levels in future generations should also be taken into account.”

The Management System for the Processing, Handling and Storage of Radioactive Waste for protecting people and the environment Safety guide No. GS-G-3.3 – International Atomic Energy Agency

Waste records - outputs

Lots of discussions and initiatives:

- Meetings with Radioactive Waste Management, Low Level Waste Repository and Sellafield
- Feeding into ongoing projects/initiatives (including metadata schema work)
- Advising on secure transfer of records
- Flagged up as a key topic for international collaboration (more to come later)

Preserving records from EDRMS

Many records of long term value are stored in an EDRMS. Many stay active/current for long periods of time:


- What is best way to look after these?
- Can some basic preservation happen in an EDRMS?
- When should they move to the archive?
- What metadata (and checksums) should go with them?

EDRMS preservation - outputs

- EDRMS preservation task force – to share experiences and create good practice guidance on this topic

[Home](#) > [Blog](#) > Who wants to work with us on EDRMS Preservation?

Who wants to work with us on EDRMS Preservation?



Jenny Mitcham
⌚ Last updated on 28 July 2020

Back in April I introduced you to the EDRMS task force.

Our initial plan was to meet for six months and to carry out some of the following activities:

- Articulating the challenge/s of preserving records from an EDRMS
- Sharing experiences of tackling these issues and learning from each other
- Highlighting other useful case studies or examples of good practice
- Gathering together existing sources of guidance
- Highlighting gaps in current guidance

...and this is what we have been doing but we are nearly at that six month point and we realise there is still work to be done.

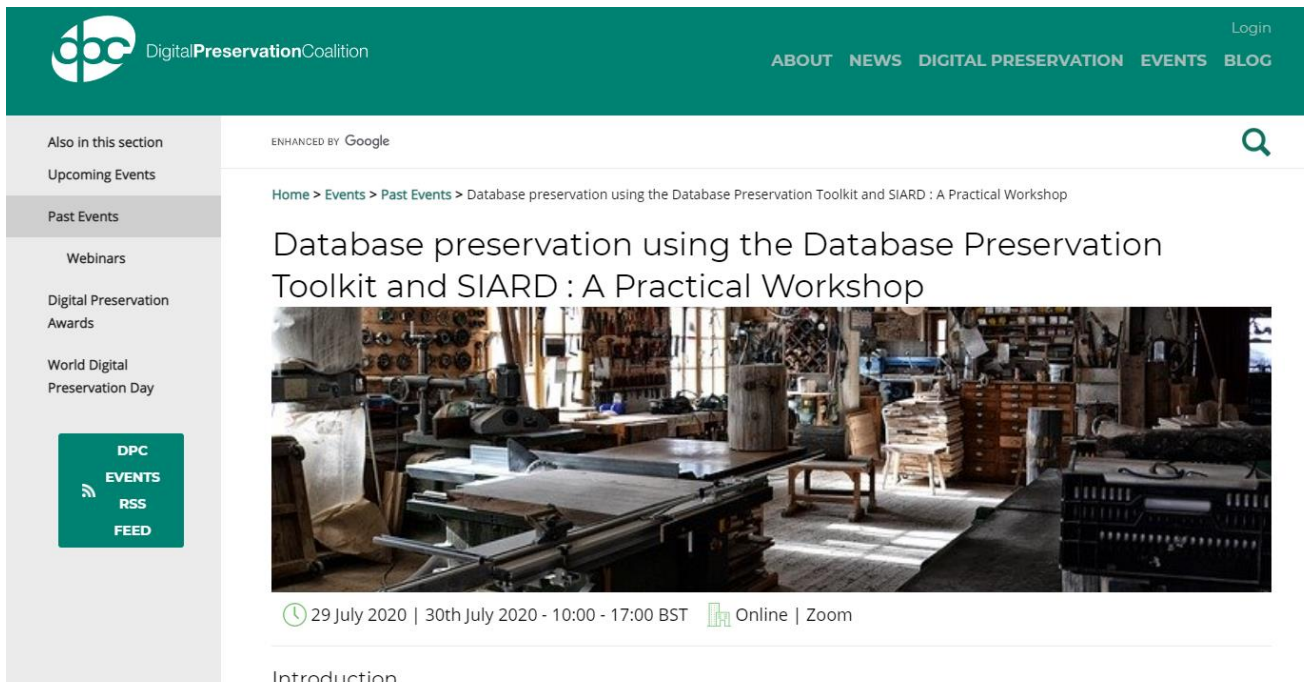
Look out for launch event in April 2021

Database preservation

- The NDA have a large number of legacy databases that need to be retained beyond the life of the systems/software they rely on
- Expensive to maintain legacy systems
- They would like guidance on how to preserve these ...but good practice advice on this topic is lacking

Database preservation - outputs

- The pandemic put a stop to some of our plans
- ...but the NDA project enabled us to go ahead with a practical workshop on the DBPT



The screenshot shows the Digital Preservation Coalition (DPC) website. The header is teal with the DPC logo and navigation links: ABOUT, NEWS, DIGITAL PRESERVATION, EVENTS, BLOG, and a Login link. A sidebar on the left lists 'Also in this section' with links to Upcoming Events, Past Events, Webinars, Digital Preservation Awards, and World Digital Preservation Day. Below this is a green button for 'DPC EVENTS RSS FEED'. The main content area, enhanced by Google, displays a breadcrumb trail: Home > Events > Past Events > Database preservation using the Database Preservation Toolkit and SIARD : A Practical Workshop. The title of the workshop is 'Database preservation using the Database Preservation Toolkit and SIARD : A Practical Workshop'. Below the title is a photograph of a workshop interior with various tools and equipment. At the bottom of the page, the dates '29 July 2020 | 30th July 2020 - 10:00 - 17:00 BST' and the format 'Online | Zoom' are listed.

Digital Preservation Coalition

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Also in this section

Upcoming Events

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Home > Events > Past Events > Database preservation using the Database Preservation Toolkit and SIARD : A Practical Workshop

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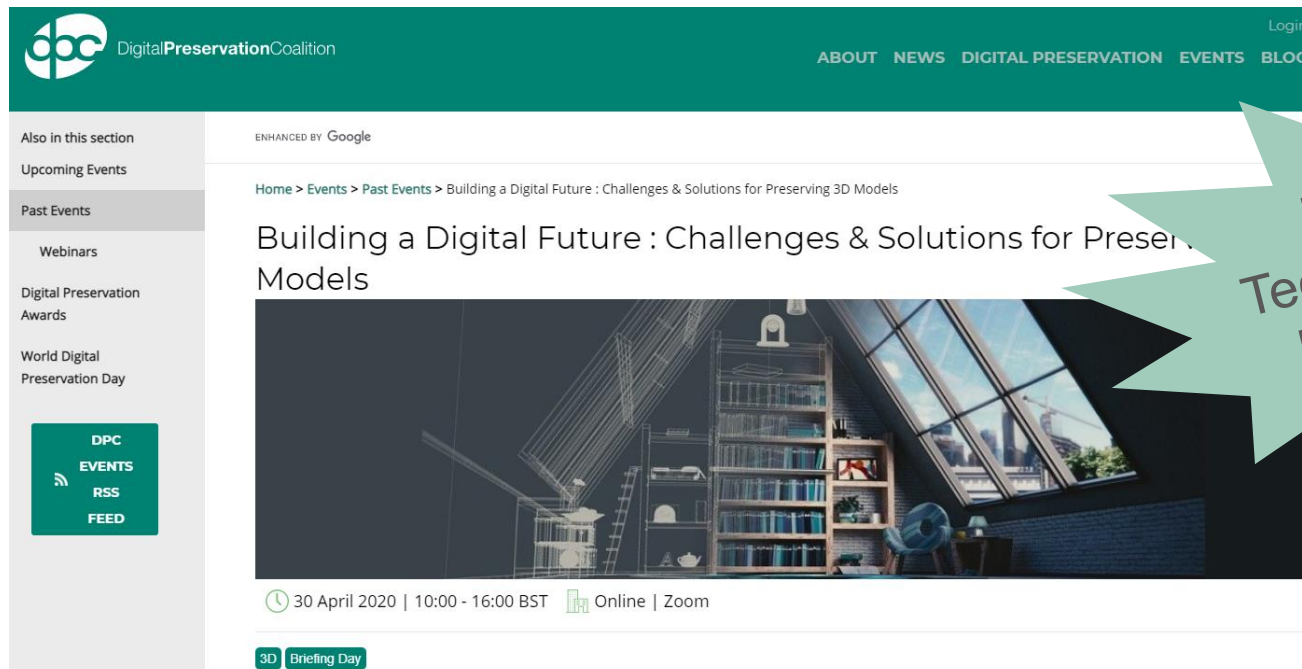
Introduction

3D digital engineering models

- The NDA create and manage 3D models of their buildings
- These are hugely complex digital objects consisting of geometry, databases and multiple files
- Software and file formats are proprietary
- Some of the models need to be preserved for the long term...but how?

3D models - outputs

- We held a Briefing Day on this topic in April
- We have commissioned a Technology Watch Report



Look out for
Technology Watch
Report in 2021

Digitization

- Digitization of analogue records occurs frequently across the estate to facilitate access
- Nuclear archive is remote and digitization helps provide access to analogue content
- Digitized copies of some records will replace original documents to save physical space
- Audio-visual archives need to be digitized for preservation and access

Digitization - outputs

- Review of digitization procedures and related documentation
- Involvement in digitization steering group/working group
- Draft digitization policy created

Panel session

- **Martin Denvir**, Head of Information Management, Sellafield
- **Jenny Mitcham**, Head of Good Practice and Standards, DPC
- **Bob Radford**, Information Governance Lead, Magnox
- **Gordon Reid**, Nuclear Archivist, NDA
- **Martin Robb**, Information Governance Programme Manager, NDA

Future plans

- We are planning to work with the NDA for a second phase...starting soon
 - Themes based on gaps and goals in the NDA's DPC RAM assessment
 - Also built on aspirations from the Digital Preservation Policy
 - ...and complementary to the DPC programme



Future plans

- Workforce development – digital preservation skills audit for the NDA (and supporting resources to benefit the wider membership)
- Requirements for a digital archive – building on the DPC procurement toolkit
- Assessment of current digital preservation systems against these requirements

Future plans

- Checklist for procuring new IT systems with digital preservation in mind
- Continuation of the EDRMS taskforce work
- Preserving GIS
 - New Technology Watch Report
 - DPC Briefing Day
- Recovering digital content from portable media

Future plans

- A revival of the database preservation sub-project (subject to funding)
- Involvement in 'Information, Data, Knowledge Management' project
 - International collaboration led by the Nuclear Energy Agency
 - Relating to radioactive waste records
- Understanding the designated community

Not to forget...

- Continued annual assessment using RAM
- Ad hoc support and advice
- Community engagement
 - Sharing outputs and lessons learned
 - Gathering feedback from community

...and recruitment of a new DPC project officer to help with all of this!