LIFE CYCLE MODELING, THE BACKGROUND

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LIFE conference April 2006

OVERVIEW

- History of Lifecycle approaches

- Approaches at AHDS and JISC

- Impact and take-up

- (selectively) utilises *LIFE Research Review* by James Watson Nov 2005 (with some additions)

EARLY HISTORY

- **Terotechnology Handbook 1978**

  – The report advocates the life cycle costing approach and provides case studies on a selection of physical assets, including: a GLC Office Block, the National Bus Company and Rank Xerox.

- **The life cycle stages of physical assets are defined by the report as:**

  – Acquisition (of physical assets)

  – The operational life (of physical assets)

EARLY HISTORY

- LIFE Review was cast wider with research into the broader context of the concept of "life cycles" including:
  - Construction (Building and Maintenance) Life Cycle
  - Cost Analysis
  - Cost Design
  - Cost Impact
  - Family Life Cycle
  - Information (Resources) Life Cycle
  - Information System Life Cycle
  - Information Technology Life Cycle
  - Organisational Life Cycle
  - Plant Life Cycle
  - Records Life Cycle
  - Software Development Life Cycle
  - Waste Management Life Cycle

LIBRARY LIFE CYCLE COLLECTION MODELS

- **Andy Stephens 1988**

  – The application of life cycle costing techniques to library collections began with Andy Stephens of the British Library.

  – He introduces the formula for working out the total cost of keeping an item in a library throughout its life from acquisition.

  – The system is discussed and advocated, but, in this early study, no figures are applied.

- **Andy Stephens 1994**

  – uses practical case studies to input data into his model

LIBRARY LIFE CYCLE COLLECTION MODELS

- **Hernon (1994)**
  - early discussion of the "information life cycle" in the context of managing US governmental information.

- provides specific, generic stages, namely:
  - Information Creation and Gathering
  - Production, Processing and Publication
  - Transmittal (Access, Dissemination and Distribution)
  - Retrieval and use
  - Retention (Storage and Archiving) and Disposition

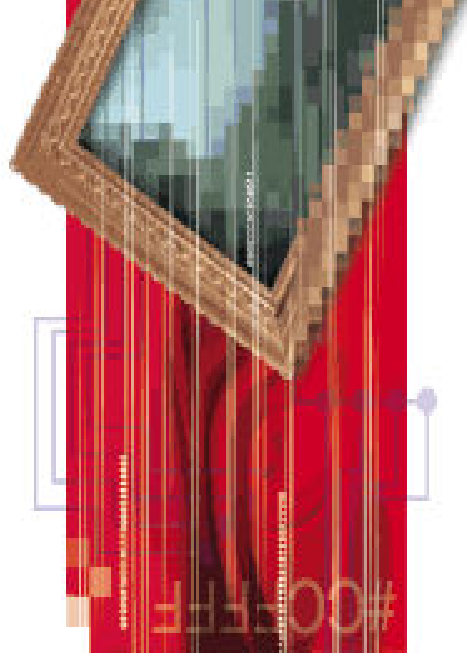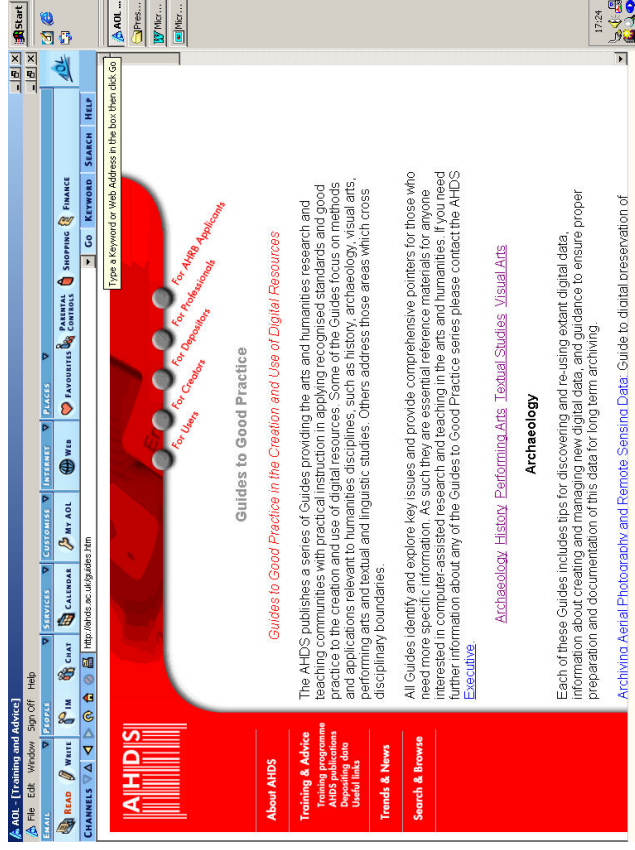- **Models item rather than organisational life-cycle**

ARTS AND HUMANITIES DATA SERVICE

- Established late 1996-distributed service to promote creation, archiving and re-use of digital research

- I joined AHDS January 2007 to develop common collection development /rights/funders

- integrating support for creation, archiving, and use fundamental to ethos and policy of service

- Basic digital item life cycle approach in first collection policy

AHDS Guides to Good Practice

- pro-active partnership with researchers
- promotes creation of good digital resources
- 10 guides online http://ahds.ac.uk/ and
- Oxbow books for print editions

ARTS AND HUMANITIES RESEARCH BOARD ICT POLICY

- **AHRB/AHDS strategic partnership - AHDS role:**

  – advise the AHRB on matters involving ICT in the arts and humanities

  – **advise the AHRB in the technical assessment of grant applications**

  – **advise the AHRB, its applicants and award-holders on standards and best practices**

  – act as a repository for selected data resources created in whole or in part with AHRB funding

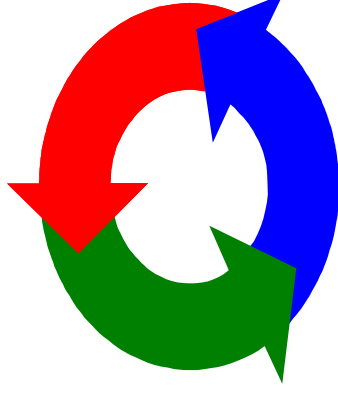 – educational re-use of those data resources and disseminate them for that purpose;

A STRATEGIC FRAMEWORK FOR CREATING AND PRESERVING DIGITAL RESOURCES

- Develops basic AHDS Collection Policy and tests for wider application

- policy framework life-cycle("continuum") of a digital resource and preservation

- Desk-top survey and 15 interviews with archives, libraries and museums

- 5 Case studies, best practice guidelines, resources and other studies

- Research starts 1997 – report Beagrie and Greenstein 1998

THE FRAMEWORK

- Three main phases of the life cycle:
  - **creation**
  - **management/preservation**
  - **use**
- Sub-divided into more specific stages
- Separates data storage and data preservation for first time

IMPACT AND TAKE-UP

- Hendley 1998 establishes the first life cycle based cost model for digital preservation.

  – adopts the strategic framework as basis of cost model

- *Moving Theory into Practice: Digital Imaging for Libraries and Archives* Anne Kenney/Oya Rieger 2000

  – Develop Formal policies to Encompass the Lifecycle of Digital Resources

  – Digitisation Workshop and Online tutorial

- Hodge 1999 *Digital Electronic Archiving: The State of the Art, The State of the Practice for ICSTI*

- Jones and Beagrie 2001 *Preservation Management of Digital Materials: A Handbook*

FURTHER INFORMATION

LIFE Research Review
by James Watson Nov 2005

http://www.ucl.ac.uk/ls/lifeproject/documentation/review.doc