Digital Images
Creation, Curation and Use

Mick Eadie
Assistant Director, AHDS Visual Arts
Creation
- Digital image characteristics
- Digitisation issues
- Workflows
Curation
- Looking after images to best facilitate their use
- Digital Asset Management
- Aims of the project
- Role of the institution
Use
- National repositories
- National image collections
- The Digital Picture
- Joining up the local with the national
The Arts and Humanities Data Service (AHDS) is a UK national service which collects, preserves and provides access to high quality digital materials that arise from or support research and teaching & learning in the Arts and Humanities.
The Arts and Humanities Data Service (AHDS) is made up of five subject centres:

- Archaeology
- History
- Performing Arts
- Literature, Language and Linguistics
- Visual Arts
AHDS Visual Arts: Who are we?

Arts and Humanities Data Service

- archaeology
- history
- performing arts
- lit., lang. & ling.
- visual arts

visualarts.ahds.ac.uk
AHDS Visual Arts: What do we do?

- **Providing** visual arts digital resources and offering advice for their creation and use
AHDS Visual Arts: What do we do?

- **Providing** visual arts digital resources and offering advice for their creation and use

- **Preserving** visual arts digital resources to ensure their long term survival and use
AHDS Visual Arts: What do we do?

- **Providing** visual arts digital resources and offering advice for their creation and use

- **Preserving** visual arts digital resources to ensure their long term survival and use

- **Promoting** good practice in the creation and use of visual arts digital resources
Welcome to AHDS Visual Arts

Image Search: 

We also offer a number of alternative ways to access the images in our collections:

your collections

Examples:
- close-up images of paintings
- archive's latest 500s
- 20th century poster design

other resources

Featured resource:
The Correspondence of William Henry Fox Talbot. Fully searchable transcripts of over 10,000 letters from and to William Henry Fox Talbot, the father of photography.

explore themes

- Applied Arts: e.g., ceramics, furniture
- Architecture: e.g., drawings, urban design
- Design: e.g., graphics, fashion
- Fine Art: e.g., painting, sculpture
- Media: e.g., photography, new media

learning index

Featured resource:
Fabric forming: A guide to textile design and dress in Britain from the 1940s to the 1960s by Susan Haschemeyer.
AHDS Visual Arts Collections
AHDS Visual Arts: Collections

- Currently around 70,000 high quality images in our online catalogue
AHDS Visual Arts: Collections

• Currently around **70,000** high quality images in our online catalogue

• Across 80 different collections
• Currently around **70,000** high quality images in our online catalogue

• Across 80 different collections

• Plus a growing number of Learning and Teaching resources
AHDS Visual Arts: Collections

The image catalogue covers most areas of the visual arts, including architecture, fine art, design, applied arts and media.
Architecture

[Image of an ornate door]

[Image of a house drawing]

[Image of a modern house]
Painting
Photography
Product & Packaging Design
Fashion Design
Interior Design
Industrial Design
Ceramics
Textiles
Never tell me that one star of all
That shone from heaven at night & softly fell
Has been picked with steady aim to make a hall

Some laborers found me, slow & cold,
And saying that no man's safety cold,
And steeped it from its first to certain end

He noticed nothing to remark
That the sun was used to Sandal and the stars
And hot from ardent pitch at one

Moreover if the spelling of a word alters
The effort on the eye, it must
Else affect the mind if the reader & I must confess that
"my language here" looks to tell me of something
More inexcusable than
My loving more

Blame is not
Furniture
A sublime ceramicist

Personal 11

Obituary

[Image of a person working in a ceramic studio]

[Image of a group of people skiing]

[Image of a handwritten note with sketches of vases]

[Image of an article with the title "A sublime ceramicist"]

[Image of a handwritten note with sketches of vases]

ahds visual arts

visualarts.ahds.ac.uk
AHDS Visual Arts Projects
AHDS Visual Arts: Advice & Guidance

Creating and Using Virtual Reality: A Guide for the Arts and Humanities

Creating Digital Resources for the Visual Arts: Standards and Good Practice

Kate Ferrie and Julian D. Richards

Catherine Grout, Phil Purdy, Janine Rymer, Karta Youngs, Jane Williams, Alan Lock, Dan Brickley

visualarts.ahds.ac.uk
AHRB Technical Assessment Form
Innovation Awards – September 2003 Deadline

Part One
1. Applicant Name: Dr David Rowse
2. Institution: Visual Arts
3. APN No: 12345

Comments:
Part One: using the headings provided, please indicate the rating for the proposal by ticking the box underneath the heading provided.

For Part Two, please give a detailed summary of the overall technical strategy, assessment of the proposal and any recommendations which you feel are relevant, for example, recommendations to enhance the technical feasibility or move the application. Additional notes may be attached in the text review copy in Part One.

Part One and Two will be passed to the peer reviewers. Part Two will be passed to the applicant.

General
Satisfactory: X
Unsatisfactory: □
Problematic: □
Na: □

Use of ICT:
Satisfactory: X
Unsatisfactory: □
Problematic: □
Na: □

Project management:
Satisfactory: X
Unsatisfactory: □
Problematic: □
Na: □

Institutional support:
Satisfactory: X
Unsatisfactory: □
Problematic: □
Na: □

Data development, preservation and access:
Satisfactory: X
Unsatisfactory: □
Problematic: □
Na: □

Other information:
Satisfactory: X
Unsatisfactory: □
Problematic: □
Na: □

Comments for Part Two only:
Project management has been graded satisfactory because the information the project and the institution has provided is clear and comprehensible. However, the applicant has not provided clear information on the project’s outcome. The applicant has not provided clear information on the project’s outcome. The project has not been funded.

Signature: Michael Edie
Date: 30/10/03
Creating Digital Images
Creating Digital Images

• The source
• Image characteristics
  - Purpose
  - Quality
  - Resolution
  - Formats
  - Compression
• Documentation
• Workflow
Purpose

Ideally should be the first consideration

Some examples:
- To provide access to a hitherto hidden resource
- To preserve and record fragile originals
- To create a resource for my specific research / and or teaching
- To use technology to discover new things
- To provide a reference
- …
Quality

• Quality an entirely subjective measure
• Something that serves its purpose
• Image and Information
• Try to future-proof as far as possible
• Benchmarking
Resolution

- Bitmapped images are made up of many pixels.
- Each pixel stores information about its colour (either RGB, Greyscale, Bi-tonal).
- RGB images typically store 24 bits of information.
- Pixels per inch (ppi) dictates amount of visible information.
A common misconception:

- “300 dpi is good ‘quality’”

- May be, but always depends on the source

- size of the resulting digital image is the original object’s dimensions in inches x ppi
The standard archival file format remains uncompressed TIFF rev. 6

Recent additions:

- **PNG**
  developed as gif substitute and possible tiff substitute. It is a fully open source format supported by W3C

- **DNG**
  an attempt to standardise digital camera RAW formats, which currently are propriety depending on camera manufacturer

- **JPEG2000**
  an international standard since December 2000 when JPEG 2000 Part 1 became ISO/IEC standard 15444
Compression

• The two types of compression ‘lossless’ and ‘lossy’.

• Lossless compression enables a reduction in file size without losing any information within the file, hence lossless.

• Lossy compression, on the other hand, reduces file size with a corresponding loss of data.

• It works by eliminating information from the file that the program deems superfluous.

• Lossy is probably the appropriate type of compression for greyscale or colour images.

• Joint Photographic Experts Group (JPEG) common type of lossy compression.
Documentation

Information which describes and explains your images and their context

Information about:
- content of resources
- technical and administrative history
- methodologies used
- purpose and re-use for research and teaching
Documentation

To ensure successful access to your digital resources now

... and in the future

Responsibility of the resource creator
What is Metadata?

- Not a new idea

- A structured form of documentation

- Describes, explains, helps to locate, retrieve & manage an information resource

- Consistent information adhering to established standards

- Can be separate from or embedded in the object it describes
Metadata

Enriches the resource by adding structured, standardised contextual information

Facilitates resource discovery thus extending usefulness of resource by widening access to it

Allows the resource to be managed effectively, increasing its long-term viability
Creating Digital Images

So far we’ve talked about…
- Purpose
- Quality
- Characteristics (resolution, formats, compression)
- Documentation (metadata)

Other factors:
- Storage / preservation
- Copyright
- What hardware and software?
- Bringing all tasks together
Workflow

- A system to manage and monitor working processes
- Defining and tracking the flow of work between individuals and/or departments
- Network of activity to accomplish something
- The path and systems used in the linked flow of activities
Workflow

- Quality
- Consistency
- Efficiency
Workflow

Some other factors:
• Staff hiring/shortages
• Local politics
• Funder’s paperwork
• Contractors deadlines not met
• …
Workflow

• Before ‘workflow’ can be addressed
  • Tasks and goals need defining
  • Specifications and testing phases
Workflow: preparation

User analysis
Define goals
Test data capture
Define deliverables
Quality assurance
Assess copyright issues

Choose metadata schema
Material preparation
Test cataloguing
Material selection
Outline delivery
Preservation
Workflow: preparation

- Work will only ‘flow’ after time and fine-tuning
- 3yr project can take 6 months to set up
- Projects can have little to ‘show’ initially
Workflow: tasks

- **Prepare material** to be digitised

- **Capture** using appropriate hardware, software and file formats and methodology

- **Document** preservation / technical information

- Document resource discovery information / **keywords** / **Indexing**

- **Quality assurance** (the digital file)

- **Quality assurance** (the documentation)

- **Storage/Preservation**

- **Delivery**
Workflow: roles

- Material selection (subject expert)
- Copyright clearance (administrator)
- Capture (photographer)
- Technical metadata (photographer)
- QA of image (photographer, subject expert)
- Preservation / storage (photographer, administrator)
- Resource discovery metadata (cataloguer, subject expert)
- QA catalogue records (subject expert, proof-reader)
- Delivery versions (web developer)
Workflow

- Preparation period is crucial …
- …and can be quite long
- Workflow will be project/format specific to some extent
- But can be generalised into key tasks
- Workflow will improve over time
- You’ll be experts by the time of your next project …
Creation

So far…
- creating digital images
- the local project
- capture (images and their documentation)
- workflow
- best practice
Moving onto this afternoon…

Curation:
- managing institutional digital assets
- technical infrastructure
- databases & repositories

Use:
- national trends in image provision
- sharing and pooling resources
- what purpose?
Curation

- Looking after digital resources
- Role of the institution
- Image (asset) management
- Technology and infrastructures
- Culture
Curation

• Institutional Strategy
• HEFCE
• Department for Education
• Interoperability/partnerships

• Local Strategies (departments etc.)
• IT strategy
• IPR and copyright issues
Technical frameworks

- Intranets
- Virtual Learning Environments (e.g. Blackboard, WebCT)
- Shared drives
- Digital slide libraries
- Institutional repositories and databases
Repositories

• JISC
• Eprints, Dspace ...
• File stores
• Particular emphasis, e.g. E-learning, Research outcomes
Repositories

- Different documentation requirements and standards from traditional image databases
- UK LOM Core metadata
- Info about: difficulty, time, usage
- Amalgam of material or ‘aggregate resources’
- Not really somewhere to store the ‘raw’ material
- Generally slow take up
- Often doesn’t include much multi-media
- To date …
Image databases

- A better place to store image collections
- Added functionality, e.g., related images, other views, zoom, high res images
- Image specific information
- Can provide content for repositories
- Able to share information with the repository seamlessly
Curation

- But not about just technology
- It is a **Cultural Challenge**
- About **processes** and **standards** not necessarily about products
- Needs clear **cross-departmental institution-wide** strategies
- Needs to comply with **National Strategies**
- Buy in from the academic community
Curation

- Create access to expertise
- Take advice on best equipment and National and International standards
- Ensure accessible training and support
- Explore opportunities for funding
- Include quality assurance
- Develop strength through partnerships
- Make available to all
The Benefits

- Easily accessible resources to support your core activities/aims
- Easily usable/re-usable resources
- Sustainable resources which justify the investment
- Robust framework that can deliver content from within and beyond host body
- Appropriate resource for target users
“The Digital Picture has been established to explore issues relating to the effects of the digital revolution on our use of images...”

Final report and survey results available from: http://thedigitalpicture.ac.uk/documents/
Digital Picture

- Image provision
  - Local initiatives
  - National collections (Edina, SCRAN)
  - National Fund (NOF, JISC)
  - Google
• The notion of a Nationally funded core collection of images appealing but complicated

• Has to be a partnership between the local, institutional and the national

• Community involvement

• Top down, bottom up
Benefit of the collaborative approach

- Pooling of resources
- Joining up of multiple institutes
- Shared software tools
- Sharing knowledge
- Greater depth of information
- More availability
- Better resources
- Large and small
- Users satisfied …
Users?

Users in different areas of education:
- Non-vocational;
- Lifelong learning;
- Further education;
- Higher education;
- Masters study;
- PhD study;
- Post doctoral research.
Users?

- Users with different roles:
  - Students;
  - Researchers;
  - Support staff;
  - Practitioner;
  - Lecturers;
  - Managers;
  - Librarians.
Users?

- Users with different learning needs:
  - Dyslexia;
  - Colour blindness;
  - Physical impairment;
  - English as a second language.
Users?

- Users with different subject needs:
  - Creative arts
  - Humanities
  - Engineering, applied sciences and technology
  - Languages, linguistics and literature
  - Library and information technology
  - Philosophy and Psychology
  - Religion and Theology
  - Social Sciences, Law and Government

*Based on HERO subject oriented directories*
Purpose

Ideally should be the first consideration of the project

Some examples:
• To provide access to a hitherto hidden resource
• To preserve and record fragile originals
• To create a resource for my specific research / and or teaching
• To use technology to discover new things
• To provide a quick reference
Fit for purpose – fit for how many purposes?
Purpose

Fit for purpose – fit for how many purposes?

Many unforeseen uses for the images you create
• Local project meets standards and best practice
• Institution facilitates the local project and helps to locate it in a national context
• Sharing, pooling image resources between depts., institutions and national collections
• Technology and culture
Creation, Curation and Use

For the institution and its staff
• Good reputation
• More project funding
• More opportunity

• More and Better image resources for all education
Digital Images
Creation, Curation and Use

Mick Eadie
Assistant Director, AHDS Visual Arts