University of Sydney practices and test-bed projects, sustainability in a distributed research environment

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Overview

- The distributed research environment, enabling discipline-based networking and interoperability
- Checklist and Guidelines for sustainability, developing an audit tool
- Interoperability middleware, development of iSpheres
- Tools for sustainable research practice
- RQF (meta)data modelling for DSpace
- Sydney eScholarship – repository, digital library, hosting, epublishing services
Sustainability and discipline based research repositories

- Functional for discipline, based on practice
- Baseline or primary data generated as function of research – useful beyond immediate needs
- Demonstrated need for sustainability
- Medium size, but complex
- Recognise specific format and metadata issues
- Interoperability and OAI compliance
- Intra and cross-institutional
- Distributed storage and data replication
- Management, rights and business processes
SORRT, Sustainable Object Repositories for Research and Teaching

A University of Sydney Practices and Testbed project of APSR, the Australian Partnership for Sustainable Repositories.

The APSR project is funded by the Australian Commonwealth Department of Education, Science and Training, under the Research Information Infrastructure Framework for Australian Higher Education, and is sponsored as part of the Commonwealth Government's Backing Australia's Ability initiative.

The SORRT project addresses and promotes the sustainability of object repositories as part of e-research (and research-led learning) infrastructure.

SORRT will:

- Develop, test, document and propose a generic sustainable model within the OAIS framework which can be adopted or adapted for the creation and management of interoperable discipline-based object repositories.
- Develop interoperable middleware and tools.
- Investigate and document robust business models required to ensure organisational sustainability and continuity.
- Address issues around citability and publication of new knowledge generated from these repositories.

The SORRT project is coordinated by the University of Sydney Library and is a partnership between

- PARADISEC, (Pacific And Regional Archive for Digital Sources in Endangered Cultures).
- ACL, the Archaeological Computing Lab at the Spatial Science Innovation Unit.
- CIPHE, the Centre for Innovation in Professional Health Education.
- SETIS, the Library's Scholarly Electronic Text and Image Service.

Australian Partnership for Sustainable Repositories comprises:

APSR and SORRT are funded by:
1 Guidelines for digitisation and sustainability: rationale

- Existing guidelines often assume knowledge
- Can be organisational, association or format specific
- Linear, little interaction, must know what you need
- Guidelines provide:
  - interactive processes, specific to needs
  - project-based needs analysis
  - guidance for new projects, or re-development of existing data sets
  - reference to best practice and alternatives
  - covers whole of project (management, rights, technical, costs etc)
  - enables audit.
APSR Guidelines and checklist

Project Initiation Survey
- survey used to gather information about a project during planning stages

Sustainability Guidelines
- an interactive digitisation checklist providing access to best practice information and resources appropriate to specific needs
Selecting a scanner
Blatner (2004 p.13) writes that a quality scanner should be able to:
- see the full range of tones in the original without losing the lightest or darkest tones
- distinguish as many steps as possible between lightest and darkest tones
- represent tones accurately between the lightest & darkest tones

More information about choosing a scanner

Using a scanner
Recommendations for online & print resources to help get the most out of the scanner.

Digitising slides
- Scan your slides at a resolution of 2000-5000 PPI.
- If your slides are black and white, use 8 bits per pixel greyscale.
- If colour, use RGB 24-48 bits per pixel.
- 2000-5000 PPI is a general guide. If you want to be sure that your images will be able to be printed at particular levels of quality & size, use this calculator.

Why scan at this resolution?
Why scan at this colour level?
How do I make sure that the colours look right?

Saving your scanned images to a file
Choose uncompressed TIFF (version 6), JPEG or RAW. Ensure each has a unique filename.

<table>
<thead>
<tr>
<th>TIFF version 6</th>
<th>JPEG</th>
<th>RAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended format for professionally captured images</td>
<td>Recommended format for internet use. Compressed to enable fast download &amp; movement on the network.</td>
<td>Unprocessed image data provides truest representation of the item.</td>
</tr>
<tr>
<td>Retains all information</td>
<td>Compression loses some information &amp; can create artefacts around text.</td>
<td>No information loss (unlike JPEG compression).</td>
</tr>
<tr>
<td>Better than JPEG for capturing sharp contrasts (e.g. text on white background)</td>
<td>Quality degrades if repeatedly edited &amp; resaved</td>
<td>Format has not been standardised.</td>
</tr>
<tr>
<td>File size much larger than JPEG. Need to generate surrogate images (e.g. in JPEG format) for internet use</td>
<td>File size much smaller than TIFF</td>
<td>Files would need to be converted to a viewable image format (e.g. JPEG, TIFF)</td>
</tr>
</tbody>
</table>

More information on file formats
More information on creating unique filenames and file management strategies
Welcome to iSpheres

iSpheres provide a distributed interoperable solution to serving a range of data - from images, sound, video and text to databases and GIS datasets. Each ISphere can manage several heterogeneous collections of digital objects, translate metadata specific to each collection into a common interoperable format, and serve digital objects transformed as required by the requesting application.

iSpheres include their own web services, so they can be installed on any Internet-connected computer with the Java runtime, making their digital object collections discoverable, searchable, transformable and downloadable. Individual iSpheres are registered with a global directory at www.ispheres.org, making them and their collections discoverable.

Any iSphere can search and retrieve data from any other ISphere (subject to authorisation) and present the results in an integrated list of resources, as well as serving data on-demand to client applications. Communication with an iSphere is through SOAP/XML.

iSpheres provide a new way of making information available to the outside world as DATA rather than web pages, with minimal effort. The concept and initial design were developed by Daniel Burn and Chris Albone from the Faculty of Medicine and Ian Johnson at the Archaeological Computing Laboratory (ACL), University of Sydney and supported by funding from the Australian Partnership for Sustainable Repositories (APSR).

Further information http://www.ispheres.org
2 middleware - iSpheres

- Middleware solution which is able to
  - Search, retrieve, transform multiple object types, images, movies, audio, and complex metadata
  - OAIS compliant
  - Act as a backend for multiple front ends
  - Perform distributed searches
  - Plug into multiple databases and data stores such as DSpace

- Funded by
  - Archaeology / Medicine - grants
  - APSR – Australian Partnership for Sustainable Repositories
  - TIF (Teaching Infrastructure Fund) grants
middleware - iSpheres

- Open Source independent solution comprising of 3 components:
  - iSpheresImage written in PHP
    - MySQL, XML, iSphereCore database environments
  - Web Client written in PHP (iSpheresPHPClient)
    - (connectivity between Web interface and iSpheresCore)
  - iSpheresCore written in Java
    - JDBC, XML, xBase database environments
- Project work is maintained through sourceforge.net which provides:
  - Code and solutions available for download
  - CVS for version control iSpheres in an open source solution
image banks @Usyd – extended test-bed

- Archaeology (redeveloped)
- Architecture (new)
- Botany (new)
- Anatomy (redeveloped)
- Pathology (new)
- Case Image (new)
- Veterinary science – OLIVER (redeveloped)
- Fine arts (planned)
- External possibilities: UQ, USQ, Bond, Uni Riad
### Image Details:

<table>
<thead>
<tr>
<th>Image No.</th>
<th>Country</th>
<th>Slide(XR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>Region</td>
<td>Copyright</td>
</tr>
<tr>
<td>Title</td>
<td>Place</td>
<td>General Notes</td>
</tr>
<tr>
<td>Source</td>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Subject

- **Headings**: [Art & Architecture Thesaurus Online](http://example.com)

- **Type**
- **Medium**
- **Format**
- **Hue**

### Description

- **Category**: Choose Category
- **Material**
- **Description**

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**Content**: © Copyright 2004-2008 [Archaeological Computing Laboratory](http://example.com) unless otherwise indicated.
Welcome to OLIVER

OLIVER is a library of learning objects, including images, available to enrolled students and staff of the University of Sydney only.

Users with EXTRO accounts

Users with OLIVER accounts

About Image Library  Contacts
Wilson Museum
Bottle 753: Anterior, Lateral and Posterior Regions of Neck, with...

1. Cingulate sulcus
2. Cingulate gyrus
3. Sulcus of corpus callosum
4. Genu
5. Rostrum
6. Frontal sinus
7. Optic chiasma
8. Pons
9. Basilar artery
10. Tubal elevation (torus of auditory tube)
11. Pharyngeal orifice of auditory tube
12. Elevation for levator veli palatini muscle
13. Medulla oblongata
14. Anterior arch of atlas
15. Dens of axis
16. Epiglottic cartilage
17. Ary-epiglottic fold
18. Vestibular fold
19. Mouth of laryngeal saccule
20. Intermediate cavity of larynx
21. Vocal fold
22. Infra-glottic cavity
23. Cricoid lamina (level

Keywords
- corpus callosum and sulcus, cingulate gyrus and sulcus, calcarine sulcus, cuneus of occipital lobe, parieto-occipital sulcus, central sulcus, precentral gyrus, tentorium cerebelli, brainstem, superior colliculus, pons, medulla, dens of axis, anterior arch of atlas, auditory tube, larynx, trachea, oesophagus

General Description
Midsagittal section of head and neck.

Note:
- (a) The splenium (41), body, genu (4) and rostrum (5) of the corpus callosum. The sulcus of the corpus callosum (3), the cingulate gyrus (2) and its isthmus (40), and the cingulate sulcus (1).
- (b) The calcarine sulcus (29) at the occipital pole.
Cross- institutional research repositories and sustainability

- Facilitate and support research practices and communities in a distributed environment
- Infrastructure, middleware and storage in the distributed environment
- Sustainability and collaboration
- Sustainability and the dilemmas of funding
- Dilemmas – continuity of unique primary data
- Test-bed – PARADISEC / APAC
PARADISEC

PARADISEC (the Pacific And Regional Archive for Digital Sources in Endangered Cultures) offers a facility for digital conservation and access for endangered materials from the Pacific region, defined broadly to include Oceania and East and Southeast Asia. Our research group has developed models to ensure that the archive can provide access to interested communities, and conforms with emerging international standards for digital archiving. Our research group is composed of investigators from the four participating institutions.

PARADISEC collaborates with other groups to promote good practice in field documentation and digital archiving of endangered languages: Resource Network for Linguistic Diversity (RNLD), the Open Language Archives Community (OLAC), the Digital Endangered Languages and Musics Network (DELAMAN) and the Electronic Metastructure for Endangered Languages Data project (E-MELD).
Tools for sustainable research practice

*FieldHelper* - supporting sustainable data collection during fieldwork

To assist the capture of data in field through the development of

- a data model,
- application and tools,
- workshops
- guidelines

to enable field researchers to implement international standards and description in order to facilitate a sustainable in-field ingest workflow for creating Submission Information Packages under the OAIS model.
RQF data modelling for DSpace
SHERPA RoMEO and Australian publication

- Investigate collaboration to create / contribute Australian publisher data
- Single entry point for publisher rights policies
- Facilitate Australian content into repositories
- Clarify publishers policies for researchers.
- Assist with continued development of (now closed) Register of Refereed Journals
Sydney eScholarship

Australian Studies Resources

Welcome to the Australian Studies Resources page at the University of Sydney Library's Scholarly Electronic Text and Image Service (SETIS).

SETIS is a creator of digital editions of Australian literary and historical texts and hosts a number of other Australian Studies Resources.

Sydney University Press

... a digital initiative of the University of Sydney Library

News

Culture, Economy and Governance in Aboriginal Australia edited by Gaynor Macdonald and Diane Austin-Broos is a timely collection of articles exploring the issues confronting Australia's indigenous population, and Australia in general.

Find out more about: Culture, Economy and Governance in Aboriginal Australia

More news...
Australian Beaches

Titles in this Series
- Beaches of the New South Wales coast
- Beaches of the Queensland Coast
- Beaches of the South Australian Coast and Kangaroo Island
- Beaches of the Victorian coast and Port Phillip Bay
- Beaches of the Western Australian Coast: Eucla to Roebuck Bay
- Beaches of Tasmania - available 2006
- Beaches of Northern Australia - available 2006

Author: Dr. Andrew Short

These seven books provide information on everyone of Australia’s 10,685 mainland beaches, as well as 838 beaches on 30 inhabited islands, together with maps of all popular beaches and photographs of hundreds of beaches right around the coast. They tell you where the beach is, how accessible it is, what it is like and if it is suitable for surfing, as well as providing a beach hazard rating for swimmers. Besides describing every single beach each book provides a background to the coast of each State – it evolution and geology, climate, oceanography including waves and tides, coastal vegetation and beach conditions and surf, as well as an assessment of physical beach hazards. The seven books represent the most comprehensive coverage of the coast of any nation.

Each book contains:
- general index
- beach index
- surfing index

Find your favourite beach - or that hidden gem.
Thank you

r.coleman@library.usyd.edu.au

SORRT: http://sorrt.library.usyd.edu.au/