E-Journal Archiving and Preservation Workshop

Research Library Perspectives

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Content

1. UCL’s strategic vision
2. UCL Library Services: supporting the researcher
3. Digital curation
4. Conclusions
1. UCL’s strategic vision
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Corporate Plan (Institutional Strategy)

Academic strategies: Teaching and Learning Research

IT Strategy

Administrative strategies: Finance, Development, HR, Estates, Registry

Information/Library Strategies
Digital Preservation context

- Through framework of UCL’s Information Strategy Committee
- Working Group on digital curation established
  - Led by UCL Library Services
  - To note current practices in paper-based records
  - To develop procedures and practices for digital curation
  - To identify roles, responsibilities and resources
  - Enormous task ranging across the whole of UCL
Starting Point: Key Questions

What is the best way to win institutional support for recommendations?

What institutional resource will be required to implement any Programme?

How do we prioritise activity?

Does digital curation have to be done in-house?
Academic perspectives

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## Popularity of E-Journal materials

**Article downloads per FTE User 2004-05**

Number of successful requests for full-text articles / Total number of FTEs

<table>
<thead>
<tr>
<th></th>
<th>CURL libraries</th>
<th>All libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>14</td>
<td>90</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>23.4</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>25\textsuperscript{th} (lower quartile)</strong></td>
<td>43.0</td>
<td>15.6</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>50.6</td>
<td>24.8</td>
</tr>
<tr>
<td><strong>75\textsuperscript{th} (upper quartile)</strong></td>
<td>62.8</td>
<td>41.4</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>138.4</td>
<td>138.4</td>
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</tbody>
</table>

Source: SCONUL Annual Library Statistics 2004-05
E-only delivery: pilot project

- UCL’s strategy is
  - to keep researchers in STM out of the Library
  - to deliver materials remotely 24 x 7
- A number of paper Engineering and Physical Sciences titles have been cancelled for 2007
  - Elsevier (499 titles)
  - American Institute of Physics (11 titles)
  - Association of Computing Machinery (29 titles)
  - Institute of Physics (16 titles)
  - Royal Society of Chemistry (20 titles)
Digital Curation?

- UCL will note the number of requests for paper titles which have been cancelled
  - 0 requests so far
- UCL will rely on
  - publishers for e-delivery
  - Portico for digital archiving
  - Portico solves digital archiving problem
    - providing long-term trusted digital access when defined trigger events lead to loss of access to publishers’ content
- UCL an Archive Founder member of Portico in December 2006
- Model is scaleable option for managing research collections
Digital Curation

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LIFE – Digital Curation

- LIFE project is a collaboration between UCL Library Services and the British Library, funded by the JISC
- LIFE 1 has developed a Generic Preservation Model for costing digital curation at an item level

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Preservation = Technology watch + Preservation frequency * Overall preservation action
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- Fits into formula for identifying whole lifecycle costs over time
  
  [http://eprints.ucl.ac.uk/archive/00001854/01/LifeProjMaster.pdf](http://eprints.ucl.ac.uk/archive/00001854/01/LifeProjMaster.pdf)
Lifecycle formula

\[ L_T = Aq_T + I_T + M_T + Ac_T + S_T + P_T \]

- **L** - Complete Lifecycle cost over time \( T \)
- **Aq** - Acquisition costs
- **I** - Ingest costs
- **M** - Metadata costs
- **Ac** - Access costs
- **S** - Storage costs
- **P** - Preservation costs
<table>
<thead>
<tr>
<th>Lifecycle Element</th>
<th>Acquisition</th>
<th>Ingest</th>
<th>Metadata</th>
<th>Access</th>
<th>Storage</th>
<th>Preservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element 1</td>
<td>Selection (Aq1)</td>
<td>Quality Assurance (I1)</td>
<td>Characterisation (M1)</td>
<td>Reference Linking (Ac1)</td>
<td>Bit-stream Storage Costs (S1)</td>
<td>Technology Watch (P1)</td>
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<tr>
<td>Element 2</td>
<td>IPR (Aq2)</td>
<td>Deposit (I2)</td>
<td>Descriptive (M2)</td>
<td>User Support (Ac2)</td>
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<td>Preservation Tool Cost (P2)</td>
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<td>Element 3</td>
<td>Licensing (Aq3)</td>
<td>Holdings Update (I3)</td>
<td>Administrative (M3)</td>
<td>Access Mechanism (Ac3)</td>
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<td>Preservation Metadata (P3)</td>
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<tr>
<td>Element 4</td>
<td>Ordering &amp; Invoicing (Aq4)</td>
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<td></td>
<td></td>
<td></td>
<td>Preservation Action (P4)</td>
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<tr>
<td>Element 5</td>
<td>Obtaining (Aq5)</td>
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<td></td>
<td></td>
<td></td>
<td>Quality Assurance (P5)</td>
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<td>Element 6</td>
<td>Check-in (Aq6)</td>
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## Suggested actual costs – Web Archiving Case Study

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of overall cost (10 year average)</th>
<th>Average cost per instance archived</th>
<th>Average cost per new title</th>
<th>Cost per title after 1 year</th>
<th>Cost per title after 5 years</th>
<th>Cost per title after 10 years</th>
<th>Cost per title after 20 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aq</td>
<td>14%</td>
<td>£17</td>
<td>£16</td>
<td>£108</td>
<td>£475</td>
<td>£934</td>
<td>£1,852</td>
</tr>
<tr>
<td>I</td>
<td>16%</td>
<td>£21</td>
<td>£0</td>
<td>£111</td>
<td>£557</td>
<td>£1,114</td>
<td>£2,229</td>
</tr>
<tr>
<td>M</td>
<td>0%</td>
<td>£0</td>
<td>£4</td>
<td>£4</td>
<td>£4</td>
<td>£4</td>
<td>£4</td>
</tr>
<tr>
<td>Ac</td>
<td>0%</td>
<td>£1</td>
<td>£1</td>
<td>£4</td>
<td>£15</td>
<td>£30</td>
<td>£57</td>
</tr>
<tr>
<td>S</td>
<td>8%</td>
<td>£10</td>
<td>£0</td>
<td>£54</td>
<td>£270</td>
<td>£539</td>
<td>£1,078</td>
</tr>
<tr>
<td>P</td>
<td>62%</td>
<td>£81</td>
<td>£0</td>
<td>£426</td>
<td>£2,127</td>
<td>£4,255</td>
<td><strong>£8,509</strong></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>£130</strong></td>
<td><strong>£21</strong></td>
<td><strong>£707</strong></td>
<td><strong>£3,449</strong></td>
<td><strong>£6,876</strong></td>
<td><strong>£13,731</strong></td>
</tr>
</tbody>
</table>

The per title costs for 1, 5, 10 and 20 years are based on the average cost per title, combined with the cost of gathering a number of instances of that title. On average the Web Archiving team aims to gather just over 5 instances of each title per year. In reality titles are gathered at different frequencies depending on the nature of the title in question. These figures do not include numbers for web sites which close or remain unchanged.
LIFE Phase 2

- LIFE 2 has been funded by the JISC
  - Firming up the economic modelling in partnership with Swedish School of Economics and Business Administration
  - Will work up more Case Studies to test the models
- Result will establish benchmarks for local digital curation services in a University or National Library
  - Creation of a local digital curation service an objective of UCL’s Library Strategy at [http://www.ucl.ac.uk/Library/libstrat.shtml](http://www.ucl.ac.uk/Library/libstrat.shtml)
  - It is irresponsible to create or store digital objects and not to curate them digitally
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Conclusions

- Digital curation needs to be embedded in institutional strategies.
- Libraries are moving to e-only delivery for journal literature.
- E-delivery depends on robust digital curation arrangements to underpin service delivery.
- Archiving can be outsourced or organised in-house.
- For research libraries, future will be a mixed model.
  - LIFE will deliver methodology for determining costs.
And finally…

- If you have been, thanks for listening
- Happy to answer questions and hear comments