Future Directions for Digital Libraries

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Introduction to SERS

- The Bodleian Library
- ~30 “Bodleian” libraries
- ~30 other libraries
- 46 college libraries
- And a few others!

- 750 Staff
- £25M budget
- 11 million items
- 156 shelf miles (250 km)
- SERS provides all electronic services
Key Influences

• Changing nature of intellectual discourse
• Shift of emphasis in outcomes
• Resource pressures
• Impact of technology
• ...this is by no means exhaustive!
Changing nature of intellectual discourse

- Artifacts of discourse
  - Books, letters, papers, websites, social media, linked-data
- Reduced turnaround times
  - Currency of content
- Rise of interdisciplinary projects
  - Reduce silo-ization
- Rise of collaborative projects
  - Reach and openness
Shift of emphasis in outputs

• Shift to born-digital content
• Publication not necessarily the primary outcome
  – Creation of (online) resources
    • Data/information unpackaged, linked, diverse format
  – Creation of communities
    • Dynamic and ephemeral content
  – Concept of “impact”
    • How is this measured?
• There is no “thing” that can be deposited
Resource pressures

- Declining/static library budgets
  - Growth in digital at expense of paper
- Increasing unit costs of traditional resources
- Lack of technical skills
  - Transition of existing skills
- Explosion of digital content
  - Digital legal deposit
- More non-digital formats
Impact of technology

• Internet technologies and standards encroach on many traditional library and academic areas
  – Often more pragmatic and better supported
  – Open Source and Open Standards
• RDF, Semantic Web and linked data
  – Access and reuse of content is a key value proposition
• Decreasing unit costs of processing and storage
• High rate of change
  – With engagement by users
Implications for Libraries

...how to maintain our role as information custodians in this changing environment...
Proactive approach to content

- Involvement early in the content creation cycle
  - Proposal or bid stage
- Embed standards and preservation at the outset
  - Preservation and curation of online content after the event is not cost effective
- Dynamic resources need hosting rather than archiving
  - Store knowledge directly – channel rather than artefact
  - Versioning
- Visibility of hosting and preservation costs
Need for flexibility

• Cannot know what content types we will need to store
  – Today's standards are tomorrow's file-format obsolescence problems
  – Accept and support heterogeneity – one size does not fit all

• Need new skills
  – Engagement with content creators
  – Wider range of technical skills

• Review design decision from the viewpoint of what it might prevent you from doing
Break down silos

• Assemble diverse ad-hoc collections to order
• Interoperability and accessibility are key aspects of preservation
  – Otherwise it is hard to justify the costs
• Accept heterogeneous metadata
  – Domain specific and web-driven standards
• Registries as enhanced catalogues
  – Linked data and distributed data
Expand view of content

• Objects have a context from which much of their meaning is derived
  – Instead of flat metadata, generate additional context objects
    • People, places, events/activities, organisations
  – Especially true for datasets
    • Much can be generated automatically via administrative systems

• Context objects provide hooks for developing online resources
  – They are often the objects of real interest to academics

• Objects are not static – preservation challenge
Be pragmatic

• Not feasible to curate everything (like the real world)
  – The “Bit-Bucket” preservation store
• Not all material is preservable for reasonable cost
  – Store or forget
• There is no single route for service delivery
  – Most of our users aren't born yet
• There is no graceful exit strategy
  – Continuous migration/evolution
Questions

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