Rethink Web Archiving

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Internet Archive

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About Me

- Digital preservation / Web Archiving
- Project / Programme / Operation/Service management
- IT related
  - 2003-2007: Programme Manager, Digital Preservation and Shared Services, JISC
  - 2007-2008: Planets Project Manager, British Library
  - 2008 – 2015: Web Archiving Programme Manager & Head of Web Archiving, British Library
  - September 2015 – Present: Director of Global Web Services, Internet Archive
20 years of Web Archiving

• Started by the Internet Archive in 1996
• Increased awareness
• Legal issues much better understood
• Growing community
  • 68 initiatives across 33 countries
  • 534 billions of web-archived files since 1996 (17 PB)
• Scholarly use of web archives
• Many challenges
Internet Archive

- A not-for-profit digital library founded in 1996 by Brewster Kahle
- Contains 24+PB of data and is growing
  - Digitised books, manuscripts and other texts
  - Movies & music
  - TV news archive: https://archive.org/details/tv
  - Software
  - Archived webpages
- Over 2 million registered users https://archive.org/about/stats.php
• https://archive.org/web/

• Started web archiving in 1996. Wayback released in 2001

• Largest publicly available web archive in existence
  • 450+ Billion URLs, 100+ million websites
  • content in 40+ Languages
  • 600,000 visit / day

• We collect a broad snapshot of the web every 60 days, +1billion ULRs/week

• Also crawl wikipedia, news, RSS feeds, YouTube etc
Archive-IT

• Subscription service launched in February 2006
• Fully hosted web application for creating, managing, accessing and storing web archive collections
• Tools for selection, scoping and capturing web resources at different frequencies
• Support for cataloguing and metadata
• Browse archived content 24 hours after capture is complete; full-text search available within 7 days
• Private access option
• Archive-IT Release 5.0
  https://blog.archive.org/2014/10/27/archive-it-crawling-the-web-together/
National Library Service

- Bespoke services for national libraries / archives
- Crawling of national domains or subsets of national domains
- Based on partners’ requirements
- Also includes metadata, index, reports and datasets, e.g.
  - WAT files
  - YouTube video report listing all YouTube files captured during each week of crawl
- Developing new aspects
Rethink Web Archiving

- Scope new services
- Consulting stakeholders incl. national libraries, archives, researchers
- Understand requirements
- Propose new service and obtain feedback
- Decide on priorities and plan next steps for development
- Principles:
  - Collaborative collection development
  - distributed preservation;
  - Global & local access
National Libraries

• 246 national libraries
• Public bodies responsible for preserving national heritage
• Legal mandate (including copyright exemption) to collect publications, access to collection often restricted
• Mandate now includes digital publication such as websites
• Archiving process needs to comply with legal requirements
• Tradition of collaborating through various federations, consortia
Key Challenges

• Need to improve quality and comprehensiveness of collections
  • e.g. social media; rich media
  • In-scope content outside national TLD
• Selective and domain harvesting as separate processes
• Effort required to integrate web archives with institutional infrastructure and workflow
• Duplication – web archives contain content streams libraries collect separately

• Access
  • Reading room access only; lack of use
  • Scholarly use not well understood / supported
An End to End Service (1)

- A end to end service offering lifecycle support
- Content collection
  - All crawls in one place
  - Manage crawls regardless of collecting tool; in-house or outsourced
  - pool of tools to choose from
- Processing, integrated with institutional environment and workflow
  - automatically generated catalogue records
  - SIPs for digital storage / preservation system
  - Metadata records for resource discovery
  - Indexes
An End to End Service (2)

- Access – various scenarios depending on institutional requirements
  - Local copy for local access
  - Hosted (private or restricted) access
  - Statistics, analytics, metadata, datasets for researchers
  - Global access via Wayback Machine and archive.org
    - TLD statistics and visualization
    - Search in WBM restricted to TLDs

- Preservation
  - Format analysis
  - Old web, real time emulation
  - Crawl + provenance data
I Wish I Knew

- How hard it is to prioritise
- How things stop working when the scale increases
- How you cannot just do things because they make sense
- How you cannot be a perfectionist
- How important it is to keep learning
- How significant organisational culture is
- How challenging yet how rewarding it is to reach consensus / find a solution