Digital Libraries and Archives in Japan

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Outline

- Background and Goal
- Overview of Digital Libraries and Archives
    - National Diet Library (NDL)
    - National Institute of Informatics (NII) and University Libraries
    - National Archives of Japan (NAJ)
    - Japan Science and Technology Agency (JST)
    - Museums
    - Public Libraries and Grassroots Activities
- Long-term Preservation and Use of Digital Archives and Resources

Background

- Major institutions in Japan have done and are doing significant efforts for building digital collections since mid-1990s
    - National Diet Library (NDL)
    - National Institute of Informatics (NII)
        - National Hub for University Libraries
    - University Libraries
    - Japan Science and Technology Agency (JST)
    - National Museums
    - National Archives of Japan (NAJ)

Background

- Activities at public libraries and by grassroots
  - Public libraries have adopted Web as an important gateway to them
  - Some public libraries built digital collections of regional cultural resources
  - Aozora Bunko – a digital text collection of Japanese novels built by volunteers

- e-Japan and u-Japan programs by the national government to promote information infrastructure

Goal of this Talk

- Overview of activities for digital libraries and archives at major Japanese institutions over the past decade
  - Overview from broader scope to catch a larger and comprehensive figure
  - Digitization of cultural heritage is an important part
- Briefly discuss issues on long-term preservation and use of digital archives

National Diet Library
（国立国会図書館）

- Some Early Projects
  - Project in early 1990s with IPA on an experimental digital library
  - A host library for Bibliotheca Universalis – a collaborative DL program among national libraries
- Legal Deposit Library
- Digital Library division at Kansai-kan, located in Kansai

National Diet Library
（国立国会図書館）

- Digital Collections
  - Kindai Digital Library – Digital Collection of Books published in Meiji to Taisho Era (Late 19th century to early 20th century)
    - Digitization of 143K books
  - Rare Books Image Database
    - 916 titles, 45K images
    - Books, Nishikie (colored wood block prints), Maps
  - Picture Book Gallery at International Library of Children's Literature

National Diet Library
（国立国会図書館）

- Legal Deposit of Electronically Published Resources
  - Resources packaged in a Tangible Medium
  - Networked Resources --- no official service yet

- WARP – Web Archiving Project
  - Government Sites, Public Sector Sites, University Sites, Event Sites

- Long-term Preservation of Digital Resources
  - Metadata Schemas
  - Experiments and reports

National Institute of Informatics
（国立情報学研究所）

- ## National Hub for University Libraries

  - ### Research center and service center as a hub for university libraries

    - Provides Webcat (union catalog of Japanese university libraries) and databases
    - Formerly, National Center for Science Information Systems

  - ### Academic Portal (GeNii)

    - Webcat, Scholarly and Academic Information Navigator, etc.

National Institute of Informatics
（国立情報学研究所）

- Institutional Repositories
  - Collaboration with university libraries
- Digital Silk Road project
  - Collaboration with the Oriental Library（東洋文庫）
- Cultural Heritage Online
  - Collaboration with Museums

University Libraries
（大学図書館）

- Some of Digitization Projects
  - Kyoto University Library（京都大学）
    - Cultural Heritage Collection
  - Kobe University Library （神戸大学）
    - Records in various formats from the Kobe Quake
  - Keio University Library（慶應義塾大学）
    - Cultural Heritage, Fukuzawa Collection
  - University of Tokyo Library（東京大学）
    - Cultural Heritage, Ogai Collection, rare books

University Libraries
（大学図書館）

- Institutional Repositories
  - A Major Project under the CSI program hosted by NII
    - 76 Repositories
  - AIRway project: Access path to Information Resources via link resolvers
    - A collaborative projects by participating university libraries
    - Enhancing reachability to resources by collecting metadata from participating repositories

National Archives of Japan
（国立公文書館）

- NAJ Digital Collection
  - Digital Archive System
    - Catalog DB
    - Collection of Digitized Resources
  - Digital Gallery
    - Exhibition of Historical Records
  - Bunzo
    - Exhibition for Learners and Children

National Archives of Japan
（国立公文書館）

- Digital Collection at Japan Center for Asian Historical Records
  - Beginning of Meiji Era (1860s) to 1945
  - Resources collected from
    - National Archives of Japan
    - Diplomatic Records Office (Ministry of Foreign Affairs)
    - National Institute for Defense Studies (Ministry of Defense)
      - Records from Former Japanese Army and Navy
  - 1 M items, 14.3 M images (as of January 2008)

- Archiving governmental records and documents in electronic forms
  - A study committee to discuss archiving of electronic records and documents
  - Evaluation of electronic records archiving

Japan Science and Technology Agency （科学技術振興機構）

- Information and database provider for the science and technology community
- J-Stage
  - Helping academic societies publish e-journals
  - 450+ journals, 100+ proceedings, etc.
- Journal@rchive
  - Retrospective collection of scholarly journals in Japan
  - 120+ journals, since late 19th century

Museums

- Major museums provides digital exhibitions on their Web pages
  - Tokyo National Museum
  - University Museum, University of Tokyo
    - Digital Museum
      - Virtual Exhibit, Digital Restoration, etc.
- Cultural Heritage Online
  - Gateway to cultural/scholarly resources owned by museums in Japan

Issues for Future

- Long-term Maintenance and Use of Digital Archives and their Resources
  - What resources/entities to be preserved
  - (Minimum) Functional Requirements
  - Social Factors

- Audience
  - Information Environment Changes
    - From Desk Top to Ubiquitous Information Access
  - User Assistance Functions

Long-term Preservation and Use

- What resources are to be preserved?
  - Digitized/Born-Digital Resources
  - Static/Dynamic Resources
    - 3D Virtual Reality Objects, Databases, Games, etc.

- In general, Digitized & Static resources are easier to preserve. However,
  - Since digitized resources are often provided with sophisticated browsing functions, the boundary between Digitized and Born-Digital is not always clear
  - Even a plain text file is not perfectly stable because of character code set and font changes

Long-term Preservation and Use

- "As is" preservation is preferable but long-term preservation may require functional degradation of documents
  - eg. Converting an HTML page into a page image
- What is the minimum functional requirements on preserved resources?
  - Readability for human
  - Searchability
  - Integrity, e.g. broken links, document boundary
  - Look-and-Feel
  - Accessibility
  - Authenticity

Long-term Preservation and Use

- ## Social factors
  - – Privacy and IPR issues
  - – Old resources often have no rights agreement with stakeholders

- ## Other Issues
  - – Metadata Issues
    - Costs for creation and maintenance
  - – Trusted Archive/Repository
    - Cost sharing
    - Functions to collect and disseminate resources could be split from long-term trusted archival repository

Summary

- Since mid-1990s, many institutions have been working on digital libraries and archives.

- There are fairly large collections such as NDL's and NAJ's digital archives

- Long-term maintenance and use of digital archives and "Really-usable Digital Archive" are crucial issues for further development of digital archives.

References - URLs

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  - Electronic Library: http://www.ndl.go.jp/en/data/endl.html
  - Kindai Digital Library (jp): http://kindai.ndl.go.jp/index.html
  - Rare Books Image Database (jp): http://rarebook.ndl.go.jp/
  - WARP (jp): http://warp.ndl.go.jp/
  - International Library of Children's Literature: http://www.kodomo.go.jp/english/
  - Digital Gallery of World Picture Books: http://www.kodomo.go.jp/gallery/index_e.html
  - Long term preservation (jp): http://www.ndl.go.jp/jp/aboutus/preservation.html
    (jp: resources in Japanese)

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- National Institute of Informatics
  - Home: http://www.nii.ac.jp/index.shtml.en
  - Sevices: http://www.nii.ac.jp/services/service.shtml
  - Digital Silk Road: http://dsr.nii.ac.jp/index.html.en
  - Cultural Heritage Online (jp): http://bunka.nii.ac.jp/

- Institutional Repositories
  - NII Institutional Repository Program:
    http://www.nii.ac.jp/irp/en/
  - AIRway project:
    http://airway.lib.hokudai.ac.jp/index_en.html

  (jp: resources in Japanese)

References - URLs

- University Library Digital Collections
  - Kyoto University:
    http://edb.kulib.kyoto-u.ac.jp/exhibit-e/index.html,
    (jp) http://edb.kulib.kyoto-u.ac.jp/exhibit/index.html
  - Kobe University:
    http://www.lib.kobe-u.ac.jp/dlib/e-index.html
  - Keio University: http://en.mita.lib.keio.ac.jp/archives/
  - University of Tokyo (jp):
    http://www.lib.u-tokyo.ac.jp/koho/guide/coll/index.html

    (jp: resources in Japanese)

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  - Digital Archive: http://www.digital.archives.go.jp/index_e.html
  - Japan Center for Asian Historical Records: http://www.jacar.go.jp/english/index.html
  - Bunzo – Help access to historical records (jp): http://www.bunzo.jp/
- **Japan Science and Technology Agency (JST)**
  - J-Stage: http://www.jstage.jst.go.jp/browse/
  - Journal@rchive: http://www.journalarchive.jst.go.jp/english/
- **Tokyo National Museum**
  - Home: http://www.tnm.jp/en/
  - Collection: http://www.tnm.jp/en/gallery/index.html
- **Aozora bunko（青空文庫）(jp): http://www.aozora.gr.jp/**

(jp: resources in Japanese)