The Development of Digital Collections in Wuhan University Library

Jinwei Yan
2005
A Brief Introduction to Wuhan University

- Founded in 1893
- A key comprehensive university
- Directly under the administration of the Ministry of Education of China
- Reorganized in 2000
A Brief Introduction to Wuhan University

- A combination of four universities
  - Wuhan University
  - Wuhan University of Hydraulic and Electrical Engineering
  - Wuhan Technical University of Surveying and Mapping
  - Hubei Medical University
A Brief Introduction to Wuhan University

• Faculty members: 3,400

• Students: 75,000
  – Graduate students: 18,000
  – Full–time undergraduate students: 30,000
  – Part-time students: 26,300
  – Foreign Students: 700
A Brief Introduction to Wuhan University

- 35 schools in 6 segments
  - Humanities
  - Social Sciences
  - Sciences
  - Engineering
  - Information Sciences
  - Medicine
A Brief Introduction to Wuhan University

• Various disciplines
  – Philosophy, Literature, History, Language, Arts
  – Economics, Law, Education, Management
  – Mathematics, Physics, Chemistry, Life sciences, Pharmacy, Resources and Environment
  – Water Resources, Hydropower, Electrical Engineering, Civil Engineering,
  – Computer, Remote Sensing, Electronic Information, Geodesy and Geomatics
  – Preclinical and Clinical Medicine, Stomatology, Public Health
A bird’s eye view of the campus
Administration Hall
Scenes in our campus - spring
Scenes in our campus - summer
Scenes in our campus - autumn
Scenes in our campus - winter
Old library hall
Library buildings

Main Library

Information Science Library

Engineering Library

Medical Library
About Wuhan University Library

• Formally founded in 1917
• Named National Wuhan University Library in 1928
• Collections (by the end of 2004)
  – Printed 5.47 million volumes
  – Electronic databases 377
• Staff members 350
• The third largest academic library in China
Composition of digital collections

• Commercial databases

• Digital collections created by the library itself
Commercial databases

• English
  – Full text databases: Elsevier, SpringerLINK, JSTOR, NetLibrary, etc
  – Index databases: SCI, EI, BIOSIS, INSPEC, etc

• Chinese
  – Full text databases: CNKI, VIP, WANFANG, Apabi, etc
  – Index databases: Index of Periodicals, CSSCI, etc
Digital collections created by the library itself

- Special subject databases
  - Collecting digital information in special subject fields
- Digitizing books published in 1911 -- 1949
- Digitizing dissertations
- Digital audio-visual system
Special subject databases

- The database of Resources in the Yangtze Valley
- The database of Hydraulic Power Engineering in China
- Both databases are components of CALIS Special Subject Database Project
Special subject databases

• About CALIS
  – China Academic Library and Information System
  – A national-wide academic library consortium
  – Sponsored by Ministry of Education of China
  – Setting up 4 national information centers and 8 regional information centers
  – Setting up the management center in Beijing University Library
Special subject database 1: Resources in the Yangtze Valley

• Cooperated by three institutions
  – Wuhan University Library
  – Yangtze Archives
  – Wuhan Center of Chinese Academy of Sciences

• Contents
  – Economic resource, tourism resource, hydraulic resource, culture and custom, environment protection, etc. in/about Yangtze Valley
Special subject database 1: Resources in the Yangtze Valley

• Formats
  – Monographs, journal articles, dissertations, conference papers, technical reports, websites, images, audio-visual materials
  – Full text, bibliographic information
Home page of Yangtze database
Image collections of Yangtze database
Special subject database 2: Hydraulic Power Engineering in China

• Cooperated by three institutions
  – Wuhan University Library
  – Information Center of State Electric Power Company
  – Department of Hydraulic Power Station Equipment, Wuhan University
Special subject database 2: Hydraulic Power Engineering in China

- Contents (1/2)
  - Fact database
    - Information about main hydraulic power stations in China
    - History of hydraulic engineering in China
  - Literature database
    - Journal articles, monographs, standards, research papers, library holdings
Special subject database 2: Hydraulic Power Engineering in China

• Contents (2/2)
  – Image database
    • Dams in China, plans of main hydraulic power stations, Three Gouges Project,
  – Map database
    • River valleys, hydraulic power stations
  – Authority database
    • River valleys names, power station names, technical terms
  – Website database
## Home page of hydraulic engineering

### Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Dam</td>
<td>- Chinese Power Dam Description</td>
</tr>
<tr>
<td>Literature</td>
<td>- Chinese Literature Catalog</td>
</tr>
<tr>
<td>Network</td>
<td>- Chinese Network Database</td>
</tr>
<tr>
<td>News</td>
<td>- News events</td>
</tr>
</tbody>
</table>

### Links

- [Chinese Power Dam](http://www.lib.whu.edu.cn/slgc)
- [Chinese Literature](http://www.lib.whu.edu.cn/slgc)
- [Chinese Network](http://www.lib.whu.edu.cn/slgc)
- [Chinese News](http://www.lib.whu.edu.cn/slgc)
Danjiangkou water control pivot

电厂名称：丹江口水电站

电站地点：湖北省

所在流域：汉江

所在水系：长江水系

主要机型：混流式

最大水头：162米

最大发电：57米
CALIS standards for special subject databases

- CALIS Technical Standards
- CALIS Basic Technical Standard of Local Sub-system for SSD
- CALIS Interface Standard of Local Sub-system for SSD
- CALIS Descriptive Metadata Standard of Local Sub-system for SSD
- CALIS Management Metadata Standard of Local Sub-system for SSD
System structure of special subject databases

- Users
  - Other systems
  - CALIS retrieval system
    - CALIS metadata database
      - Metadata harvesting server (via OAI)
        - Yangtze resources
        - Hydraulic power
        - ......
          - Local users
          - Local users
          - Local users

Getting full records
Digitizing books published in 1911 -- 1949

• CADAL project
  – China - US Million Book Digital Library Project
  – Initiated by Zhejiang University, China and Carnegie Mellon University, USA
  – To digitize 500,000 English books and 500,000 Chinese books
  – Stored both in China and USA
  – 16 Chinese university libraries participate in the project
Digitizing books published in 1911 -- 1949

- The task of Wuhan University: 15,800 titles
- Work flow of data processing:
  - Withdrawing books from stacks
  - Outsourcing of scanning
  - Checking the scanning quality
  - Assigning metadata
  - Submitting data to CADAL Center
  - Back up data of digitized books
Old books waiting for processing
Scanning
## 二十二年度國家普通歲出假預算補充表解

（甲）

<table>
<thead>
<tr>
<th>類目</th>
<th>類目</th>
<th>額金</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>一</td>
<td>文化</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>二</td>
<td>外商</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>三</td>
<td>財務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>四</td>
<td>安幣</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>五</td>
<td>媒務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>六</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>七</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>八</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>九</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

（乙）

<table>
<thead>
<tr>
<th>類目</th>
<th>類目</th>
<th>額金</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>一</td>
<td>文化</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>二</td>
<td>外商</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>三</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>四</td>
<td>安幣</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>五</td>
<td>媒務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>六</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>七</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>八</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>九</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

（丙）

<table>
<thead>
<tr>
<th>類目</th>
<th>類目</th>
<th>額金</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>一</td>
<td>文化</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>二</td>
<td>外商</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>三</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>四</td>
<td>安幣</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>五</td>
<td>媒務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>六</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>七</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>八</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>九</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

（丁）

<table>
<thead>
<tr>
<th>類目</th>
<th>類目</th>
<th>額金</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>一</td>
<td>文化</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>二</td>
<td>外商</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>三</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>四</td>
<td>安幣</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>五</td>
<td>媒務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>六</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>七</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>八</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>九</td>
<td>貿務</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

注：此表為國家普通歲出假預算各類額金的百分比表。各類平均數表之類目單位及數目詳閱表內。
Quality control & metadata assignment
Digitizing dissertations

- Separating into three parts
  - From 1911 to 1949 with CADAL Project
  - From 1950 to 2001 (unimplemented)
  - From 2002 – submitting electronic version by students
中國近代金融概況

第一章

第一节

第二节

第三节

第四节

附录

韩宪学

第二节

《論文論文》

1. 《論文論文》
2. 《論文論文》
3. 《論文論文》

沈祥之撰，人民耕地而食，異業而飲，互作貿易，無所謂交易也。相

進亦不違以交易易，日中為市，只各取所需耳。尚無商業之可言，

進乎近世，文化日盛，交易日繁，則由互換之物物交易，而進為貨

貿易交易，再更進而為信用交易。其演進也愈久，其組織也愈難，

五花八門，千顛萬錯，於是金融問題，即於此而產生矣。國民亦各

以金融事業之發展為急務。金融者，即貨幣之流通狀況，經濟演進

情形之描述而已。然國家之財政，民生經濟，亦莫不與焉。故社會
Workflow of data processing

**Submission Subsystem**
- Students submitting dissertation
- Disqualified data
- Dissertation pre-DB

**Audit Subsystem**
- Auditors auditing dissertation
- Qualified data

**Retrospective Subsystem**
- Scanning dissertations before 2002
- Dissertation retrospective

**Collection Subsystem**
- Dissertation cataloging
- Dissertation DB

**Retrieval Subsystem**
- Users accessing dissertation retrieval
Digital audio-visual system

• Audio-visual materials are helpful for enhancing the intelligence of students
• Network is powerful for transmission of digital audio-visual materials
• Digital audio-visual materials are relatively easy to be collected
Digital audio-visual system

• Contents
  – Music
  – Movies
  – TV programs
  – Language learning
  – Lectures
  – Courseware
Digital audio-visual system

Audio-visual System

- Music: CD, VCD, DVD, TV
- Video: VCD, TV
- Courseware: VCD, TV
- Lectures: Tape, CD
- Language learning: Teachers, Vendors
Digital audio-visual system

• Description of digital audio-visual materials
  – Audio materials
    • <Descriptive Metadata for digital audio materials>
      from *Standards for Digital Libraries* by CAS
  – Visual materials
    • <Descriptive Metadata for digital visual materials>
      by Wuhan University Library, based on DC and
      <Descriptive Metadata for digital audio materials>
Digital audio-visual system

• Copyright issues
  – Audio-visual materials purchased must be legal editions
  – Agents should be authorized by publishers
  – Programs can only be accessed in campus network
  – Using a software to protect the files from illegal linking and downloading
Further development

- Continuing to follow CALIS, CADAL and other state-wide digital library projects
- Developing a system to deal with printed and digital maps
- Continuing to digitize dissertations from 1950 to 2001
THANK YOU