

CALIS ETD sharing project is initiated in 1999. It includes three sub-projects: the development of Chinese thesis and dissertation abstract and full text database; the purchasing of foreign language thesis and dissertation abstract and full text database; the utilizing of free charged ETD resources.

After four years' development, Chinese thesis and dissertation abstract database has 100,000 records, which are submitted by 80 CALIS members. It will be extended to full-text database in the near future. From 2000, CALIS started to organize the cooperative purchasing of ProQuest dissertation abstract database, more than 70 members benefit from the importing each year. While at the same time, about 300,000 selected full texts from ProQuest dissertation database are purchased by 90 members together to form a foreign language thesis and dissertation full text database sharing among participating members. At the end of last year, the cooperation between Networked Digital Library of Theses and Dissertations (NDLTD) and CALIS were in the process. NDLTD helped CALIS established the mirror site of NDLTD database in China already. It definitely helps CALIS members to utilize the free charged ETD resources. Next, CALIS plans to integrate all the ETD resources to unified search platform to provide one-stop ETD service.

This article gives a comprehensive picture of how CALIS ETD sharing project operates, what it provides, and the vision of it.

Title: Electronic Thesis and Dissertation System Development in China

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Abstract: Theses and Dissertations are a type of valuable resource. At present there is not any institution like UMI that digitalizes all Chinese theses and dissertations and provides a service with them in China. Although, several database vendors have started making ETD databases. With the development of network technology and successful experiences with ETD projects in other countries, some universities in China are attempting to collect native ETD resource files submitted by students. As one of the first universities in China, Tsinghua University began to collect its own ETDs by an online submission system in 2000. So far, about 30 universities in China have established their own ETD submission and retrieval systems and an ETD is required of all Master and PhD candidates.

To share ETDs among the universities in China, the China Academic Library Information System (CALIS) funded the CALIS-ETD digital library project. The Tsinghua University staff is in charge of implementing the project in 2003-2005. The project includes about fifty member universities in China now and will expand to more members in the future. In this paper, four major topics about CALIS-ETD project are introduced and discussed.

1. CALIS-ETD helps the member universities establish the submission and retrieval system that is OAI compatible. The main functions of the system include submitting ETD, checking ETD format and integrity, cataloging ETD such as adding print holdings location, converting ETD file format into PDF and encrypting PDF, issuing the ETD automatically by web, providing OAI interface as OAI data provider. We select MS Word, Latex or PDF as submitting format and PDF for representation and archiving format. The system supports Chinese full-text retrieval.
2. Standards and techniques applied by CALIS-ETD. It mainly includes some internationally recognized standards and some defined by the workgroup of CALIS-ETD project such as OpenURL, OAI, ODL protocol, OAI-identifier, metadata standard including Dublin Core, ETD-MS by NDLTD, CALIS-ETDMS by the workgroup of project etc.
3. The CALIS-ETD metadata database as OAI service provider gathers all metadata of the members by OAI. It supports some functions such as metadata search, metadata browser, access statistic etc and applies OPENURL in linking metadata to full-text ETD at individual member sites. The CALIS-ETD metadata database supports the ODL protocol developed by Virginia Tech in order to realize wider interoperability.
4. The method of CALIS-ETD project organization and administration is introduced. The CALIS-ETD project workgroup confirms that member universities comply with the adequate form of workflow to implement the project.

There are still many questions to research and discuss: for example long-term preservation of ETD, accessing and displaying of special characters such as mathematical expressions or chemical molecular formula etc. Finally, we wish to share our ETD experiences and learn a lot from the other countries' project in ETD implementation.