

An Introduction & Comparative Study on Three Digital Information Integrating Platforms of Academic Libraries in China

中国高校图书馆三大数字资源整合平台 介绍与对比研究

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Introduction

- **ExLibris MetaLib/SFX, Tsinghua Tongfang CNKI Grid Resource Sharing Platform** (清华同方CNKI网格资源共享平台), and **TRS IIP** (TRS资源整合门户) are three info integrating platforms used more frequently by academic libraries in China.
- Analyze and compare the three products in terms of buyers, functions and features, operating environment, standards, and personalized services, etc.
- Pros and cons of the products and summarize several gaps between platforms produced in China and those made abroad.
- Preparation work that prospective libraries need to do before selecting and purchasing any of the integrating platforms.

Introduction (cont.)

- With the development of digital technologies, electronic information resources are increasing rapidly, e.g.:
 - By the end of 2006, Tsinghua Univ. had 350 databases, 42,000 full text journals, & 92,000 e-books;
 - By the end of 2005, Fudan Univ. had 250 databases, 29,000 full text journals, & 90,000 e-books.
- Facing the ever-increasing digital resources, academic libraries must involve more with management and maintenance of these resources.



Introduction (cont.)

- Many databases have their own search platforms with different search methodology.
- Users not only need to log onto different platforms, but familiarize themselves with different search methods.
- Therefore, how to integrate various digital resources so that the user can locate library resources more effectively by using a unified interface is an urgent problem that needs to be solved.

MetaLib/SFX

- ExLibris MetaLib/SFX (Israel) has over 1,000 clients in 40 countries. Users in China include the following and other potential users:

- | | |
|--------------------------|--------------------------|
| ◆ Tsinghua | ◆ Sichuan Univ. |
| ◆ Fudan | ◆ Nanjing Normal Univ. |
| ◆ NLC | ◆ Capital Normal Univ. |
| ◆ Beijing Normal Univ. | ◆ Beijing Univ. of Tech. |
| ◆ Beijing Jiaotong Univ. | ◆ Xiamen Univ. |

Major Functions of MetaLib/SFX

- Information portals
 - It can integrate various resources, including: OPAC, special collection database, e-journal, full-text database, index/abstract database, search engine, newspaper, archives, etc.
 - It provides a comprehensive central knowledge base with preconfigured access to commonly-used resources, as well as local knowledge base configuration tools to enable access to institution-specific resources.

Major Functions of MetaLib/SFX (cont.)

- Metasearching
 - Simultaneously searching heterogeneous remote resources from a single search interface.
- User Administration
 - Providing a range of options for user authentication and authorization, including integration with library or institutional proxy servers, LDAP directories, ILS patron files, and single-sign on systems, as well as integration within a Shibboleth framework.
- Personalization
 - Research support tools let users reflect their individual preferences in the MetaLib interface, e.g. personalized resource lists, saved search result records, searches and alerts, & personalized e-journal lists.

Major Functions of MetaLib/SFX (cont.)

- SFX

- SFX is a software program that provides direct links from library databases to related online services, such as full-text , OPAC local holdings information, preferred document-delivery suppliers, related Web-based resources , local information repositories, etc.
- A number of well-known information product and database vendors such as ISI, CSA, UMI, EBSCO, Elsevier, HighWire, OCLC, PubMed, Dialog, & ProQuest are all customers of SFX.
- SFX is tightly integrated with other ExLibris products and many other library solutions.

Main Features of MetaLib

- Navigate and search various e-resources via alphabetical list, subject, resource type, etc.
- Supporting storage and export of search results in multi format (e.g. MARC21, EndNote X2)
- Compatible with USMARC, CNMARC, Dublin Core, XML, HTML, Z39.50 HTTP.
- Flexible seamless integration with original user authentication and authorization systems (e.g. LDAP, iChain, Shibboleth, CAS SSO, etc.) or other library automation systems.
- Supporting Unicode & the interface in multi languages.
- Robust resource statistics management tools, providing the rate of utilization and users preference.

Existing Problems of MetaLib/SFX

- The interface in Chinese market looks boring; does not reflect local features
- Searching and search results:
 - Does not support search with quotation mark
 - Cannot download search records in batches
 - Search results from a single database cannot be listed in order
 - Title search does not work on Citation Linker
- Unable to build an index for Chinese journals without ISSN
- The users manual is not in Chinese
- Not enough Chinese databases on CBK; unable to download full-text from CNKI database

Tsinghua Tongfang CNKI Grid Resource Sharing Platform

- A system software platform that supports information resources integration, exploration, and utilization.
- Major Features
 - Unified search system for heterogeneously distributed databases
 - Unified resources description and rapid location
 - Librarian can catalog and classify various digital resources using standard metadata via the platform.
 - User can search the database using database name and subject scope. The platform can quickly locate the database and start searching.

Tsinghua Tongfang CNKI Grid Resource Sharing Platform (cont.)

- Major features
 - Unified resources navigation
 - Unified navigation of various resources according to subject characteristics, format of publication, first letter, etc.; easier browsing.
 - Unified searching of heterogeneous and crossing databases
 - It can enter directly to CNKI series databases and self-built specialized databases
 - Enter heterogeneous databases via standard agreements
 - Enter Web version heterogeneous databases via USP (Union Search Platform).

Existing Problems of Tsinghua Tongfang CNKI Grid Resource Sharing Platform

- Only when regular search words or logic relations listed on unified search interface are supported by corresponding database, can you finish the search.
- The display function can set up the display of search results used by each database. It is unable to do a unified displaying of all search results.

TRS IIP (v2.0)

- A platform for resources integration and unified searching by Beijing TRS Information Technology, Inc.
- Supports all main stream databases in China, e.g. Chaoxing, Boliquan, Shushen, Chinese Patents, Chinese Industrial Economics Database, Tsinghua Wentong, etc. (如超星、博利群、书生、中国专利、中国产业经济数据库、清华文通等), as well as a number of well-known foreign databases.
- Connects to search engines, e.g. Souhu and Xinlang (同时连接搜狐、新浪等搜索引擎).

TRS IIP (v2.0) (cont.)

- User can search simultaneously a number of different databases, e.g. free databases, subscribed databases, library catalog, Z39.50 Database. When a search request is sent, the user can see the number of results from each database or connection status. The searching results and information sources are displayed in unified format.
- **TRSInfoLinker** links to related information of other resources databases.
- Statistics on resources usage, e.g. top list of IP visitation at certain time slot, usage rate of specialized databases, most frequently used resources.
- Allows database administrator to set the number of saved results each user can put in storage file, & the number of saved search words in the history, etc.

Existing Problems of TRS IIP

- Not resources integration in real sense, e.g. after user receives results via a unified interface, full-text is not accessible directly. It is only accessible after entering the databases of targeted literature.
- Not compatible with international standards, e.g. TRS uses Simplified Chinese encoding not Unicode. It can process digital resources in simplified Chinese, yet integrating capability not powerful enough for data in traditional Chinese, English or other foreign languages.
- TRA unable to distinguish live or dead links.

Some Thoughts

- Price
 - ExLibris MetaLib/SFX is more expensive compared with the Chinese platforms.
- Purchase integrating system as well as library automation management system to form a complete set.
 - BNU, Beijing Jiaotong Univ, & CNU bought both MetaLib/SFX and ALEPH 500.
 - Renmin Univ. of China purchased CNKI and TPI Digital Library Construction Management Platform.
 - Jilin Univ. & Nat'l Defense Univ. used TRS series products for database construction and resources integration.

Some Thoughts (cont.)

- 相对于MetaLib/SFX来说，国内的两套资源整合系统存在以下不足：
 - 整合系统性能不太稳定
 - 与国际标准接轨、与其他系统的兼容方面，有欠缺
 - 对资源配置知识库的建立和积累不足，增加了用户使用系统的难度
 - 文献的链接机制开发不足，没有形成合理的整合链接技术和构架
 - 个性化定制和服务功能有待进一步提高
- Compared with MetaLib/SFX, the two platforms made in China have the following minor problems:
 - Functions of the integrating system not stable enough
 - Some problems in compatibility with other systems
 - Personalization and service has room for improvement
 - Literature linking mechanism not fully developed
- However, the two Chinese platforms are less expensive, easier to communicate with the companies when technical support is needed.

国内部分高校图书馆资源整合情况

单位	系统名称	整合深度	跨库力
北京科技大学图书馆	CNKI网络	其馆内网络数据库的大部分资源可以通过统一检索平台检索。	12
北京中医药大学图书馆	CNKI网络	已整合中国期刊网全文数据库、中国期刊题录数据库、馆藏书刊目录。	50
首都师范大学	CNKI网络	已整合本馆中外文数据库15个和24所图书馆馆藏目录。	8
北京林业大学图书馆	TRS	仍处在前期数据制作阶段	
东北师范大学图书馆	TRS	已整合本馆全部中外文数据库	不限
北京交通大学图书馆	MetaLib/SFX	配置各类资源166种。其中本馆电子资源58种，其它各类型免费资源108种。	不限
复旦大学图书馆	MetaLib/SFX	本馆全部订购资源的80%及部分免费资源	不限

Some Thoughts (cont.)

- 对于今后将要引进资源整合系统的图书馆，在购买之前，可以从一下几个方面作好系统的评价工作
 - 界面定制和资源配置的灵活度；
 - 系统翻译器技术的拓展能力(可以包容哪些类型的数据库和资源)；
 - 返回检索结果的质量和速度；
 - 支持链接的质量和范围；
 - 提供个性化服务的能力；
 - 服务器的硬件配置和操作系统的平台；
 - 技术支持能力和响应时间；
- Prospective libraries need to evaluate the following before selecting and purchasing any of the platforms:
 - Flexibility in customization of the interface & resources allocation
 - Expanding ability of system translating technology
 - Quality and speed of returning to search results
 - Quality and scope in supporting linking
 - Ability in providing personalization services
 - Hardware allocation of the server and platform of the operating system
 - Ability and responding time of technical support

Conclusion

- Know the state of library's budget and technology strength
- Find out the users needs
- Know the exact goals of digital resources integration
- Learn from the experience of other libraries
- The goal is that the user can locate library resources more effectively.



Thank you very much!

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