Even with a new generation of information technology, it is difficult for a single library to collect all available documents and meet the library patron’s expectation of receiving the most complete, up-to-date and accurate information. Many libraries have attempted to find the best way to overcome this challenge. Automation and cooperation with other libraries are evaluated by every library as a potential means to improve their services and operations and offer a better service to users. In Thailand, academic libraries also have a vision of building a library automation network across the country. This article gives some overview of progress in developing an automated library network of Thai academic libraries, with an emphasis on major network and automation developments.

BACKGROUND OF ACADEMIC LIBRARIES IN THAILAND
The first academic library in Thailand was set up on 26 March 1915, when King Vajiravudh (Rama VI) established Chulalongkorn University. The library was originally located in the Faculty of Arts, but more recently has been merged into the Centre of Academic Resources, Chulalongkorn University. This library is considered to be the oldest and largest collection in Thailand, with total collection of 1,800,000 volumes. In subsequent years, more university libraries were set up across the country, such as: Thammasat University Library, which was established in 1934, along with the foundation of the University. Nowadays, Thammasat University Library is one of the largest academic libraries in Thailand, with total collection of 1,061,132 volumes. In 1954, the Library of Srinakharinwirot University, formerly a College of Education, was established in the Faculty of Education Building. In 1956 the library was assisted by funds from USAID (United States Agency for International Development) and USOM (United States Operations Mission) to construct a new library building, which was considered a very modern building for its time. Between 1964-1967, as part of the first National Economic Plan, three regional universities were established, in order to accelerate the economic and social development of the country. They were: in the north, Chiang Mai University; in the northeast, Khon Kaen University; and in the south, Prince of Songkla University. Libraries were also set up for these institutions, usually at the same time, with an emphasis on the study areas of the new universities, which included engineering, agriculture, medicine and natural sciences. In the early 1970s, the library of National Institute of Development Administration or NIDA was established, in line with NIDA’s focus on graduate level study and research, and specializing in administrative and national development. Soon after, the Asian Institute of Technology, with its own library, was established, in order to serve as an international graduate school, with a specific focus as sciences and engineering.

In the early days, most academic libraries had a few thousand books and mostly in Thai language. They were treated as only a department in the office of the rector, until 1966, they were promoted to academic faculty status. Even so, academic libraries were much more developed than other types of libraries in Thailand, especially in their services, and technology. During early 1990s, Thai academic libraries were boosted by large funds from the government and their own universities. As well, there is more cooperation between academic libraries through nationwide network.

TYPES OF ACADEMIC LIBRARIES
For the purpose of this paper, the term “academic libraries” means libraries of higher education institutions such as: university libraries, college libraries, and research institute libraries. The Thai education system has 6 types of academic libraries:

1. Libraries of public universities
   At present, there are 24 public universities under the authority of the Ministry of Education, all over the country. Some universities have encompassed the main libraries and branch libraries.

2. Libraries of Rajabhat Institutes
   Rajabhat Institutes were formerly established as Teachers’ Colleges. Currently, there are 41 Institutes that are located in provincial areas throughout the country. They have recently extended their study programs into various fields, and are becoming more like the public universities. The Ministry of Education supports these institutes.
3. Libraries of Rajamangala Institutes of Technology
Formerly, these Institutes were known as “Vocational and Technical Colleges”. There are 47 Institutes across the country. The Ministry of Education supports the institutes but their libraries are quite small.

4. Libraries of private higher education institutions
Currently, there are 50 private universities and colleges in Thailand. They have their own administrative system, overseen by the Private University Committee, which is responsible for the standard and accreditation of private universities and colleges. Library resources are also included as a key point of these standards.

5. Libraries of higher education institutions for special purposes
5.1. The libraries of the military and police academies, such as, Chulachomklao Royal Academy, Naval Academy, Royal Thai Air Force Academy and Police Cadet Academy.
5.2. The Libraries of the Universities for Buddhist Monks, such as, Mahachulalalongkorn Rajwittayalai and Mahamongkut Rajwittayalai.
5.3. The Libraries under Ministries, such as the ministry of public health, which has two colleges: the College of Nursing and the College of Public Health.
5.4. There is also one higher education institution for International Graduates, the only one institution of its kind in Thailand. It has a substantial library which an extensive collection of English language materials. That is the Asian Institute of Technology (AIT) Library.

Recently, the Thai Government initiated an innovative way of university administration, the so-called government-supervised public universities, with the intention of promoting flexibility in university management. New universities were set up, such as: Suranaree University of Technology, Walailak University and Mae Fah Luang University. They have their own administrative structures and management, and are required to maintain libraries to support the institutions’ activities. King Mongkut’s University of Technology, Thonburi, a former public university, is an example of an institution which has recently transferred to the government-supervised public university system. Currently the Thai Government is attempting to encourage the public universities to move out of the older more bureaucratic system to this new system.

PUBLIC ACADEMIC LIBRARY NETWORK
Since 1975, all public academic libraries have begun to cooperate together to share resources, and take joint action on activities, such as: acquisitions, cataloguing, serials, information services, media services, and information technology. In 1997, the Office of Information Technology Administration for Educational Development 9th Commission on Higher Education, at the Ministry of University Affairs (now the Ministry of Education) set up UniNet (Inter-University Network) as a higher education network. UniNet has since then provided a national and international network services for supporting all universities and higher education institutions in Thailand. Subsequently, public academic libraries were encouraged to form additional national, regional, or special library networks to develop library cooperation and other activities. There are now four academic library networks, which have an important role in Thailand. These are PULINET, THAILINET-M, ThaiLIS and Journal Link.

PULINET (The Provincial University Library Network)
In 1986, Chiang Mai University took a leadership role in establishing PULINET (the Provincial University Library Network), which was established to provide cooperation in the following areas:

- To develop information services;
- To create bibliographic databases;
- To promote information resource sharing among public university libraries in provincial areas;
- To develop an information delivery system;
- To apply new modern technology to library networking.

### Table 1
**PULINET Libraries**

<table>
<thead>
<tr>
<th>Library</th>
<th>Province</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burapha University Library</td>
<td>Chonburi</td>
</tr>
<tr>
<td>Chiang Mai University Library</td>
<td>Chiang Mai</td>
</tr>
<tr>
<td>Khon Kaen University, Instructional Resources Centre</td>
<td>Khon Kaen</td>
</tr>
<tr>
<td>Mae Fah Luang University Library</td>
<td>Chiang Rai</td>
</tr>
<tr>
<td>Maejo University Central Library</td>
<td>Chiang Mai</td>
</tr>
<tr>
<td>Mahasarakham University, Academic Resource Centre</td>
<td>Mahasarakham</td>
</tr>
<tr>
<td>Naraesuan University Library</td>
<td>Phitsanulok</td>
</tr>
<tr>
<td>Prince of Songkla University; John F. Kennedy Library, Institute of Academic Services, Pattani Campus</td>
<td>Pattani</td>
</tr>
<tr>
<td>Prince of Songkla University; Lady of Athakraweesuntorn Library, Hat Yai Campus</td>
<td>Songkla</td>
</tr>
<tr>
<td>Silapakorn University Library, Sanamchandra Palace</td>
<td>Nakhon Prathom</td>
</tr>
<tr>
<td>Suranaree University of Technology, The Centre for Library Resources and Educational Media</td>
<td>Nakhon Ratchasima</td>
</tr>
<tr>
<td>Taksin University Library</td>
<td>Songkla</td>
</tr>
<tr>
<td>Ubonrachathani University, Instructional Resource Centre</td>
<td>Ubonrachathani</td>
</tr>
<tr>
<td>Walailak University, The Centre for Library Resources and Educational Media</td>
<td>Nakhon Si</td>
</tr>
<tr>
<td></td>
<td>Thammarat</td>
</tr>
</tbody>
</table>

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In the early days, PULINET linked only six public academic libraries, located in the provinces. Today, there are fourteen libraries (from thirteen institutes) in the network, as follows:

(See Table 1).

Nearly 20 years on, PULINET is a successful provincial academic library network. For example: All library databases can be accessed by PULINET’s members through any Online Public Access Catalogue (OPAC), including, special databases and local databases, such as research databases, thesis databases, and the Thai Journal Index. Moreover, a CD-ROM Sharing Network Service is provided for member libraries. Library patrons can request items from any other library site of PULINET. In addition, PULINET offers the “PULINET Card Service” for library members and graduate students. They can take their PULINET card to borrow books or other materials from PULINET Libraries by themselves, which is much more convenient and faster than interlibrary loan service. Currently, although PULINET has been merged into ThaiLIS (see below), these cooperative activities are still processed in provincial areas.

THAILINET-M or Thai Library Network Metropolitan

In 1993 PULINET’s success stimulated the development of THAILINET-M (Thai Library Network Metropolitan) which is overseen by a Sub-Committee on University Library Development of the Ministry of University Affairs (now the Ministry of Education). During 1995-1997, the project started with a total budget of US$ 6,590,000 (Baht 263,600,000) and linked up twelve public academic libraries in the Bangkok Metropolitan area. It aimed to create standard access to databases, develop a library automation system for each library, share information resources, build an efficient network system among academic libraries, connect to PULINET and other networks, and develop information services based on user demands. Twelve libraries joined THAILINET-M. (See Table 2).

THAILINET-M achieved some of its goals, for example: purchasing computers and application software, creating databases, and bringing more effective services to users. But its goals of cooperation and resource sharing among the member libraries have not been so successful.

ThaiLIS: Thai Library Integrated System

As a result of the Thai economic crisis in 1997, public academic libraries faced budget cuts. Thus in 1998 the Bureau of University Affairs initiated a merger of THAILINET-M and PULINET into ThaiLIS (Thai Library Integrated System), which is one nation-wide network. The project also expands the library network to include all twentyfour public academic libraries under the Ministry of University Affairs, by connecting campus network systems to the UniNet (Inter-University Network). The project’s intention is that all public universities and higher education institutions will be able to access library databases from all members, plus CD-ROM databases, and other information resources, from a single search. ThaiLIS has three special major projects, which are: the Union Catalog, Reference databases and Digital Collection projects.

Union Catalog Project

For a long time, Thai academic libraries have attempted cooperative cataloguing in order to avoid duplicating cataloguing activities and to share resources throughout the country. The Union Catalog is a shared resource of all universities, through which the library patron can complete an information search of all university resources from one point of access. The total budget is US$ 200,000. (Baht 8,000,000).

In June 2003 the Ministry of University Affairs signed a contract with VTLS, Inc., to implement the “Virtua Union Catalog” system to facilitate this. All twentyfour public academic libraries have sent their bibliographic records to load into the main databases for checking and editing. The project’s working group has been studying MARC details in order to assign the same standard to all catalog entries.

Reference Databases Project

Electronic bibliographic and full-text databases are very expensive in Thailand, and only a few academic libraries can afford the subscription. ThaiLIS is supported by a total budget of US$ 3,425,000 (Baht 137millions) and aims to subscribe to major electronic databases on behalf of all public academic libraries throughout the country. During 2004–2008, the project expects to enable public academic libraries, and the libraries of the Rajabhat Institutes and the Rajamangala Institutes of Technology, to connect and use the reference databases through their own campus network system connected to the UniNet (Inter University Network). The project plans to subscribe to seven online database hosts: ACM Digital Library, DAI (ProQuest Digital Dissertations), HW Wilson, Lexis.com and Nexis.com, ScienceDirect, IEEE/IEE Electronic Library (IEL), as well as ISI Web of Knowledge. (At present, only six online databases are subscribed, ISI Web of Knowledge is yet to be added.)
Digital Collection Project

The Digital Collection project is supported by a total budget of US$ 1,650,000 (Baht 66 millions). A few academic libraries have started adding to the project database by digitising special collections; for example, Silpakorn University has launched its Thesis Digital Collection in August 2001. Most are still preparing and studying what is required.

Journal Link

In 1998 the Thailand Committee of the Deans of Science Faculties initiated “Journal Link” as a union list of journals in Thailand supported by the Thailand Research Fund. In the beginning, the Library of the Faculty of Science, Chulalongkorn University cooperated with other academic libraries to launch the project, which consisted of only a list of science and technology journals in Thai libraries. Later, the database was extended to cover all subjects. Currently, there are 186 libraries from all types of libraries all over the country which belong to Journal Link. Member libraries can create and update their own journal holdings through the Internet, as well as search the database. Moreover, Journal link also offers interlibrary loan services, full text articles, and document delivery service, through an electronic payment system or PIN card. Journal Link is a very useful and successful network for journal resources in Thailand.

Unfortunately, in early 2004, the Faculty of Science, Chulalongkorn University which initiated Journal Link, found it couldn’t continue Journal Link, so the project is now supported by TIAC or Technical Information Access Centre, which is under the Ministry of Science and Technology.

Library Automation Systems in Academic Libraries in Thailand

Since 1986 Chulalongkorn University Library has acted as the national distribution centre for CDS/ISIS software in Thailand. The CDS/ISIS program was developed by UNESCO and in the early years of automation, most Thai academic libraries created databases using CDS/ISIS. In 1988, Chulalongkorn University Library started the Chulalinet Project (Chulalongkorn University Library Information Network) to interconnect all libraries on its university campus. In 1994, Chulalinet adopted INNOPAC software to implement the library automation system, offering remote access to the catalogue. It was considered to be the first fully integrated library automation system in Thailand.

When PULINET and THAILINET-M were set up (1995–1997), they depended on links between a number of automated library systems across the country. Different integrated library softwares such as: INNOPAC, DYNIX, HORIZON and VTLS, were customized for Thai users, and were used by various libraries. These integrated library softwares consist of a full set of system modules such as: Cataloguing, Circulation, OPAC, Serials, and Acquisitions. Thai language materials are technically difficult and costly for library automation systems to manage, especially indexing. The language is one of the barriers to developing library automation systems. Moreover, Thailand is not a rich country in terms of technologies brought in from foreign countries, especially computer hardware and software. However, these issues challenge Thai academic libraries to be conscientious in solving problems and developing appropriate library automation systems.

In the second phase of library automation (1999–2001), the government provided the funds needed to implement the necessary upgrades for library automation systems. Most libraries upgraded their integrated library program, especially their Online Public Access Catalogue to Graphic mode or WEBPAC through the Internet. Most also created their own library web sites, to provide access to library databases, and other online databases.

Today public academic libraries are facing limited budgets which constrain their ability to finance library automation maintenance and software upgrade. Since libraries must pay in overseas currency for system maintenance, some libraries have cancelled their contracts and turned back to look for cheaper options or develop new local programs. For example recently, Lady of Atthakraweesuntorn Library, at the Prince of Songkla University, Hat Yai Campus, stopped using INNOPAC and began to develop new library software, called PSU Library Automation System, designed by Applied Software Development Group, at the University Computer Centre. This library software covers six modules: Acquisitions, Cataloging, Circulation, Serials, Web OPAC, and a System Administration Module. The program is still being tested but if the project is successful, significant money will be saved.

Conclusion

Although Thai academic libraries have come late to library automation, they have tried to take a middle path. ThaiLIS was expanded to include all other public higher education institutions, and in the near future, is expected to include private academic libraries and other types of libraries. Presently, ThaiLIS is running three major projects; those are Union Catalog, Reference Databases, and Digital Library projects. Thai academic libraries have attempted to develop the library automation systems and a nation-wide network. They will need to be able to do it more effectively than they can today, in order to achieve their goal of an automated library network. However, good cooperation and sincerity among the member libraries is necessary to achieve them. In addition, Thai academic librarians need to be aware of some of the significant technology trends.

Notes and References

23. Ibid.
By exploring Indigenous perspectives and complex relationships, we can more clearly see the problems that come from the many assumptions at the heart of International Relations and its family of theories. The current dominant global political and legal order, invented in Europe, is state-centric and has since spread everywhere to create the discrete borders that mark the geopolitical world map most use today. Developing a global perspective is increasingly vital to thriving in the 21st century. We can apply this international mindset to our travels, our work, how we give (charity) and what we pay attention to (the news and media we consume). Because whether we like it or not, we share this planet with billions of other people. The more you have a global perspective, the more you understand that. There’s no need to fear what’s different. It’s just different. What is a global perspective?