

## **Effective Solutions for Accessing Electronic Resources – based on Experiences of the Warsaw University of Technology Main Library**

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### ***Abstract***

This paper describes how the Warsaw University of Technology Main Library manages the access to electronic resources - organizing and developing search tools that allow users to get an authorised online information quickly and efficiently. We present here such tools as: A/Z list of e – journals, A/Z list of e – books, e – databases (an interactive table), Digital Library of Warsaw University of Technology, analysis and statistics tools (Aleph, HAN, dLibra). At the end of this paper, we present our trends and plans.

### ***Introduction***

The mission of high education, a large number of full-time and extramural students and new methods of teaching and learning, require very flexible library management. The role of an academic library is changing towards an information resource centre.

Aspiration for continuous progress of the education system as an essential part of teaching and learning, analysis of users' needs and expectations – these are the main tasks of a modern academic information resource centre.

The university mission and the listed targets influence practical aspects of the library management such as:

- users-oriented needs,
- winning new users groups, analysing their demands, promoting library activities,
- changing librarians' habits – “users guarantee the existence of the library”,
- identifying negative effects of the library activities and eliminating errors and losses,
- applying new information technology in the library processes,
- using statistical and analytical tools to increase the quality of library services,

The paper presents the WUT Main Library “e-learning environment”, management of access to e-resources, organization and development of search tools, usage of analytical and statistical methods for efficient management of e-resources.

## ***Warsaw University of Technology (WUT)***

Warsaw University of Technology focuses on undergraduate and graduate programs in engineering and applied sciences. With over thirty thousand students served by over two thousand professors and lecturers, Warsaw University of Technology is the largest and ranked as the best engineering university in Poland.

“The origins of Politechnika Warszawska – Warsaw University of Technology date back to 1826, the official commencement of educational programs in engineering in our institution. There are seventeen faculties covering almost all fields of engineering and applied science. Sixteen of these faculties are based on two urban campuses in the capital city of Warsaw, and one faculty in the ancient city of Plock in north-east Poland” [1].

### ***WUT Main Library***

“The WUT Main Library is the oldest and the largest technical library in Poland. The Main Library is integrated with all branch libraries, student hostels libraries, faculties and institutes libraries and together they create the WUT library network. The Library collects, catalogues, maintains the collection and makes the material stock available.

The Library’s staff of 87 includes professionals with M.A in librarianship and information science and technical experts with M.Sc in engineering. Most faculties of the University have their own specialized library collections, collected in accordance with the interests of the academic staff and students.

The current Library holdings include over 1, 500, 000 volumes of printed books, about 40, 000 volumes of standards and more then 200, 000 volumes of journals.

The Library cooperates with many Polish and foreign academic libraries. In addition, the Library’s staff actively participate in conferences, seminars, workshops, fairs, study sessions, exchange programmes and similar events” [2].

### ***The WUT MAIN Library resource management***

Electronic resources are rapidly replacing printed resources and in order to make the collections accessible and useful, the management of a modern library is also changing.

The WUT Main Library creates and acquires numeral e-resources. The efforts for the library automation started in the early 80’s. At the beginning the Main Library offered only its own databases, such as:

- computer catalogue (books and journals),
- the WUT staff bibliographic database,
- PhD thesis database.

The automation idea materialized in 1999, when the Aleph integrated library information system, was implemented. The Aleph system allowed creating the WUT central catalogue which includes the printed resources of the Main Library, branch libraries and faculties libraries.

The Library automation is still being introduced and now its resource management is based on several systems such as:

- Aleph integrated library system ( printed resource),
- HAN Hidden Automatic Navigator (on line commercial resource),
- dLibra Digital Library Framework (digital collection).

All of these systems support the Library acquisition, resources management and the increase of information services quality. It is very important that all different systems can be integrated with each other, which enables the Library to provide convenient access to all resources.

### ***The Aleph system***

The WUT Main Library has been working in the Aleph system since 1999. This system not only integrates all WUT libraries printed resources but also makes current and periodical usage reports. These data enable making combinations of users groups, circulations, the most popular titles, etc.

The Aleph's usage reports allow to generate: number of registered and new registered users, number of circulations, returns, renewals and orders, etc.

Another group of data is following analytical reports:

- statistics of circulations (circulations, returns, renewals, orders – for chosen group of users and chosen collection),
- statistics of circulations (chosen group of users and period),
- circulations statistics of chosen collections (chosen group of users and item status),
- statistics of renewals and statistics of orders of chosen collection's (group of users and item status).

The Aleph shows the most popular time after the Library opening hours - the statistical data show that books orders (via Internet) are made between 9 pm. and midnight. It means that users need a 24-hour access to the Library.

The Aleph reports can also be used to make ranking of the most popular document and performance indicators for the Library printed collections.

### ***HAN system***

Electronic resources are the largest consumers of the library acquisition budget, which affects orders for resource acquisition and licensing termination.

In order to avoid the rising costs of licenses, libraries worldwide cooperate and create consortia. This helps to negotiate better conditions of purchasing licenses.

In Poland, we also have a lot of library consortia that give access to numerous commercial online sources.

The WUT Main Library participates in the following Polish consortia:

- Science Direct/ Elsevier,
- Springer Link,

- Wiley Inter Science,
- IEEE/IEE Electronic Library,
- EIFL Ebsco, Proquest
- ACS, AIP/APS
- Chemical Abstracts, COMPENDEX, SCI-Ex, Scopus and other.

The surveys of using on line commercial resources was not satisfying for many reasons. One of them was useless usage reports delivered to libraries by publishers and vendors. These data covered the indicators based only on publishers' parameters. Thus, they did not allow libraries to make statistical analyses.

Taking into consideration all these aspects the WUT Main Library made a decision to purchase the HAN system.

"The HAN system manages and controls the access, supports integration of the applications and presents them on- and offline. The system regulates each program start and ensures the availability of each application. It helps the users and supports the librarians" [3]. The HAN can also be integrated with the Aleph system.

The most important aspect of the HAN is that it provides a legal use of commercial resources from any computer to entitled users. Users can log in with a library card without additional authorization.

The HAN gives options to conduct the following analyses:

- the most popular time of using databases (not limited by the Library opening hours),
- which database was used during a period of time,
- which databases were used most by a specific group of users,
- how long users navigated through a chosen database.

These data guarantee a possibility of making a variety of statistical analyses depending on the Main Library needs.

The 2006 statistic report showed that INSPEC database was used the least and it resulted in dissolving of INSPEC license for next year.

The HAN shows resources which are used by a small group of users, but more important is the time of using. This helps to decide which licenses are worth continuing.

Another analysis shows that chemists are the most active group of users and it justifies chemical databases subscriptions.

For example: The Faculty of Chemistry – 10, 000 logins and 1, 500 hours, The Faculty of Chemical Engineering and Processing (the smallest WUT faculty) – 3, 000 logins and 330 hours.

In 2006 Elsevier Science Direct turned out to be the most popular database – about 17, 000 logins and IEEE/IEE Electronic Library – 6, 930 logins.

The system also allows to count simultaneous users. The figures are used to make a decision on what license should be purchased by the Library.

The implementation of the HAN improved the management of electronic resources and allowed the Library to implement the license policy consciously. The Library became accessible for users in for 24 hours 7days a week.

### ***The WUT Digital Library and dLibra - Digital Library Framework***

“dLibra is the first Polish software for building digital libraries which has being developed by the Poznan Supercomputing Centre since 1999. The program is the result of research in the field of digital libraries. It is now the most popular software of this type in Poland which enables building professional repositories of digital documents” [4].

The WUT Digital Library was launched in 2005 as the Collection of Local Electronic Holdings. Publications are grouped in four collections such as: History of Science and Technology, History of Warsaw University of Technology, History of Education, Texts and Handbooks (texts published by WUT and other publishers, used as readings assigned for WUT courses).

The main task of the WUT Digital Library is to create appropriate digital resources and provide open access to the educational sources and scientific output of the Warsaw University of Technology [5].

Presently, the digital resources are too small to carry out statistics analysis but the structure and content of WUT DL can be based on the Aleph statistics reports. The Aleph shows which titles of printed books are most popular, which of them do not have enough items, etc. This information can help make decisions on which digital copies should be made to include in the content of WUT DL.

The dLibra software is used by many academic libraries in Poland and we hope that all of them will be willing to join a national repository.

### ***Search tools***

The age of Internet made academic libraries undertake new challenges. The new aims for the libraries are: collection, organisation, protection and dissemination of information and knowledge. These aims can be achieved by creating and organising an open access to the global information resource in the Internet.

Users need support in searching the information they need because there are to many on line sources available.

The WUT Main Library supports users by providing several search tools. The first step was to design the Library Web Site, which integrates information services and resources. This Web Site provides links to the subject, specific on line information. This is a gateway to hundreds of databases, thousands of titles of journals and books, delivered by publishers and vendors.

- *The interactive table of e – databases*

The table of e-bases allows users to overview all of e-resources available through WUT Main Library. Users can choose some databases directly, selecting branch of

science or a type of database (abstracts or full – text). This interactive table provides access to all of them in the same place.

Majority of publishers and vendors offer a variety of search tools for librarians and users, such as: A/Z list of journals, search links, multi search, etc.

Many academic libraries in Poland decided to buy commercial tools that appeared on the market in a variety of forms, e.g.: Ebsco A/Z List, LinkSolver, Ovid A/Z List, Search Link, etc.

Purchasing the tools means extra costs and the libraries have to decide whether or/and what to buy.

The WUT Main Library has found the way to solve the problem creating its own search tools :

- *A/Z list of e - journals,*

The A/Z list of e-journals was designed in Access. Users can quickly locate and link to titles they are interested in. This list includes over 12, 000 titles. The register is updated as often as it is necessary. In addition, it is integrated with the WUT catalogue and users can link to the same title in printed version if the e- journal has its counterpart. The list included the information about how long the specific title has been available in the online version (the number of years), how long the journal embargo lasts (the range from 6 to 12 months) and whether some of the titles have their counterparts in a printed version. To meet the requirements we have to devote a lot of time but the undoubted advantage is that with this tool, the Library can save money.

- *A/Z list of e-books.*

There was also designed a A/Z list of e-books as a navigational tool for researchers who want to get a specific title of a book (among e - books databases) in a quick way. The WUT Main Library A/Z list of e- books is now unique in Poland. This tool covers several databases (over 2, 000 titles of books), giving access through the title to each URL address.

- *MyiLibrary Platform*

Up to now, publishers and vendors of e-books sold only packages that were included in a variety of databases such as: CRC Press, Knovel, Referex Engineering.

We can now order single titles of e-books which are published by different editors.

The chosen titles can be added to the MyiLibrary platform as the Library property.

This Platform is a new solution which enables creating the Library's own collection of e-books which can be register in the WUT catalogue. Users can look through a list of titles (over 50, 000 titles made in Excel) and then they can order the chosen titles in the WUT Main Library Acquisition Department.

The MyiLibrary has introduced information services for researchers by providing a convenient access to the WUT Library digital content.

The solutions presented in this paper show what kind of information policy the WUT Main Library is implementing.

All systems (Aleph, HAN, dLibra) that the Library applied to manage its resources allow to link information (about the same title) with each other. For example, a digital book in the WUT Digital Library is also described in the WUT catalogue as a

bibliographic record. If on line journals or books have their printed counterparts you can also find them in the WUT catalogue.

### ***Cooperation with Warsaw University of Technology***

To identify the users' needs, the Library staff participate in the meetings of the WUT Senate Commissions, take part in discussion on research, didactic and financial system.

The joint holdings acquisition policy is accepted by the research staff and librarians who are members of the Library Advisory Board. Quarterly committee meetings make decisions about subscriptions of printed journals, purchase of licenses, etc.

The representatives of the University Student Parliament play a crucial advisory role. They define their needs and thus help to create the Main Library digital collection. The Library also supports the activities of the International Student Office by providing packages of printed and electronic books for foreign students and other people who study in English. Promotion of information services and special training is also provided.

Using the option "*Purchase Request Form*" on the Library Web Site, students and researchers can recommend materials for purchase.

This option corresponds to expectations of the University scientific environment supporting e-teaching and e-learning. It also gives the Library new possibilities to develop a stronger cooperation between Library and University faculties.

### ***Training for students and researchers***

Variety of resources in printed, electronic and digital versions requires developing new skills of both users and librarians. That is why we organize a whole range of activities to provide for the development of such skills.

The programme of courses includes providing instruction on the basic use of scientific resources and developing information skills such as:

- general training - on how to use the WUT Main Library,
- training on finding scientific information and using e – bases, A/Z list of e – journals, A/Z list of e- books, searching Web sites (for master's degree students, PhD students, researchers),
- training for specific WUT courses (environmental engineering, chemistry, materials science, etc.),
- training on using information sources on individual request .

### ***Conclusions***

In the age of digital world the increasing number of e-resources calls for applying management of e-resources and using new technologies.

Libraries have to comply with the new requirements regardless of budgetary constraints.

Academic libraries in Poland can solve the problems, by creating joint repositories, designing joint portals, organizing consortia, etc.

There is a feasible chance to establish a national repository of Polish academic libraries (dLibra as a joint software), which could develop an access to e – resources on a wide scale.

Joint library portals and multi searching could provide users with new possibilities to access local, domestic and international sources. This is the only way to achieve a success.

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