Electronic information sources III

Freely accessible scientific sources

In this module we will present freely accessible scientific information sources. You will learn something about digital libraries, archives and subject information gateways.

Module objective:

- to acquaint you with freely accessible scientific sources
- to explain what digitization means
- to explain what a digital library is
- to present digitization projects
- to present the initiative of an open access to scientific information - Open Access
- to explain the concept of subject information gateways and present some of the gateways
- to show other possibilities of searching for scientific information on the Internet

Basic terms:

Digital library - collections of digital documents available via a network + user services *(for more details see the definition in the text)*

Open Access, OA - an initiative the aim of which is an open, quick, barrier-free, free access to scientific literature on the Internet for all users; a new model of publishing scientific literature *(for more details see the OA definition in the text)*

Open journal - a journal with an open access in which reviewed scientific articles are published, and which may be accessed on the Internet free of charge.

Repository, archiving server - a server intended for storing a large number of digital files with the purpose of their long-term archiving and accessibility.

Subject gateway - a service intended for enabling access to online subject-specific or thematic information sources.

Contents

1 MODULE INTRODUCTION

This module is a mixture of various information sources which you may access via the Internet. They are above all sources of freely accessible scientific information, which you may also use during your studies.

Due to the fact that this is a broad issue, it is likely that some of the information included in this module will be insignificant to you to a certain extent, and that some sources will be missing.

2 DIGITIZATION

The concept of digitization is closely related to electronic information sources and digital libraries. *Digitization is a reformatting technology which consists in converting a document into electronic (digital) form. Digitization includes the creation of metadata, which are stored together with data. The result of digitization is a document in visual or textual form.*

3 DIGITAL LIBRARIES

A digital library is a managed collection of information together with adequate services, while the information is stored in digital form and is available via a network.

A digital library is *an integrated system comprising a set of electronic information sources and services, enabling the acquisition, processing, search and use of information stored in this system. The purpose of a digital library creation is to provide users with a uniform access to digital or digitized documents.*

The term digital library has a few older synonyms, e.g. "electronic library", "virtual library", or "library without walls".

Digital libraries enable access to ***text documents***, ***visual materials*** *(photographs, pictures, maps),* ***audio recordings*** *and* ***audiovisual documents****, but also to digitized* ***three-dimensional collector items*** *and objects etc.*

Difference between a digital library and WWW

Digital library:

- it is organized,
- entering data in the system is controlled (entered items are subject to regulation).

WWW:

- the Web is not aimed at any particular group of users,
- it is not an organized collection,
- a short half-life of documents,
- with the exception of the so-called Deep Web.

Benefits of digital libraries: Improved conventional library services, such as remote, permanent access to information, more effective search, information sharing, communication support and cooperation within various user groups (scientific communities, education...); such libraries offer space savings, brand new types of services etc.

3.1 EXAMPLES OF EUROPEAN DIGITAL LIBRARY PROJECTS

First we would like to call your attention to two relatively large European projects which enable access to digital documents in the stocks of European memory institutions.

The European Library, http://search.theeuropeanlibrary.org

Europeana.eu, http://europeana.eu

3.2 EXAMPLES OF CZECH DIGITAL LIBRARIES

3.2.1 NATIONAL DIGITAL LIBRARY

The purpose of the NDL project is a long-term protection and accessing of documents published in the Czech Republic: historical documents published until 1800 and modern documents published after 1801. The National Digital Library consists of:

Manuscriptorium, http://www.manuscriptorium.com

Kramerius of the National Library of the Czech Republic, http://kramerius.nkp.cz

WebArchiv, http://www.webarchiv.cz

3.2.2 EXAMPLES OF OTHER CZECH DIGITAL LIBRARIES

Czech and Slovak Digital Parliamentary Library, http://www.psp.cz/eknih

Digital libraries of works by important Czech figures:

Digital Library of Arne Novák, http://knihovna.phil.muni.cz/arne-novak

Karel Čapek (famous czech writer), http://www.mlp.cz/karelcapek

3.3 EXAMPLES OF FOREIGN DIGITAL LIBRARIES AND PROJECTS

Google Books

http://books.google.com

Google Books is a project by Google. In Google Books there are full texts of books and journals, or their extracts and fragments. Outside the U.S., works published until 1864 are shown in full-text versions. Works published until 1922 are available in the U.S.

Open Library

http://openlibrary.org

The objective of the Open Library project is to enable access to full texts of books to which copyright does not apply. It contains more than 20 mil. entries; over 1 mil. books are available in full-text versions.

Gutenberg project

http://www.gutenberg.org

More than 30 thousand freely accessible books digitized by volunteers.

Universal Digital Library,

http://www.ulib.org

It contains more than a million of books with no specific subjects; you may also use a catalogue in which it is possible to limit your search by the year, language, subject of interest etc.

International Children's Digital Library

http://en.childrenslibrary.org

4 OPEN ACCESS - OPEN ACCESS TO SCIENTIFIC INFORMATION

The purpose of Open Access is therefore ***an open, barrier-free, free access to scientific literature via the Internet for all users.*** Definition: "*Literature which should be freely accessible online is such that scientists give the world without expecting any payment for it.*

*The concept of "**open access**" to literature means **free accessibility of literature on public Internet**, enabling any user to **read, download, copy, distribute, print, search** or **create links** to full texts of such articles. [...] The only limitation imposed upon the reproduction and distribution, and the only demand of copyright in this area should lie in providing the authors with a control over the integrity of their works and the right to have their authorship properly acknowledged and stated."*

Therefore, the main traits of OA are: A permanent and free online access to documents (full texts) for all users. Documents accessible free of charge, even though they might not have been created for free. The copyright owner gives users an explicit permission to ***read, download, copy, distribute, print, search or create links*** to his/her work.

4.1 OPEN JOURNALS

Publishing works in the so-called *open journals* is sometimes called the **golden way.** Reviewed scientific articles are published in open journals; however, the reader has a quick and free access to them.

4.1.1 DOAJ

The most well-known directory of scientific open access journals is **DOAJ – Directory of Open Access Journals (*http://www.doaj.org*)**.

4.2. OPEN REPOSITORIES

Another option of accessing scientific works in the OA mode is **open repositories** (also **institutional repositories** or **subject-specific repositories)**. *Repositories (archiving servers) are servers intended for storing a large capacity of digital files with the purpose of their long-term archiving and accessibility.* This way of OA publishing is called the **green way.**

4.2.1 Institutional repositories

Institutional repositories, as the name indicates, are storage facilities of works published by scientists, managed by the individual academic or scientific institutions. They contain preprints or postprints of articles, research reports, and also e.g. educational and administrative documents etc.

Exmples:

ECS EPrints Repository – University of Southampton, School of Electronics and Computer Science;
eScholarsip – University of California
DSpace@Cambridge - University of Cambridge

4.2.2 Subject repositories

Subject-specific archives are oriented at particular fields of science; they contain preprints or postprints of articles, conference contributions, and other scientific works.

4.2.3 Repositories of university qualification papers

Repositories of UQP are sometimes a part of **grey literature storage facilities**.

Examples:

PhilSci Archive – poměrně úzce zaměřený digitální archiv, preprinty z oboru filozofie vědy
Cogprints – oblast kognitivních věd

Theses:

DART-Europe E-theses Portal
dissonline.de

4.3 CREATIVE COMMONS, http://creativecommons.org

"The Creative Commons licence is a set of public licences bringing new possibilities in the area of copyright works publishing: it strengthens the author's position in the course of deciding under what conditions the given work will be publicly accessible. The Creative Commons licences are based on a simple principle: through them, the author enters into a contract with all potential users of their work, and based on this contract, they provide users with some rights to the work, and reserve other rights."

5 SUBJECT INFORMATION GATEWAYS

In this section of the text we would like to present other types of electronic information sources in which you can search for scientific information - **subject information gateways**.

A subject gateway *is a service in a network environment intended for enabling access to selected online subject-specific or thematic information sources.* Information gateways do not necessarily have to be subject-specific; there are often multi-subject gateways.

5.1 SUBJECT GATEWAYS IN THE CZECH REPUBLIC, http://jib.cz

In the previous modules we referred to the metasearch engine, Uniform Information Gateway, several times. Within the UIG project, subject information gateways are also created. All of them use the already known MetaLib system and an add-on service called SFX, which enables you to search for full texts (they were shown in the previous module, EIS II). The gateways are as follows: **Library and Information Sciences (KIV), Musica (MUS), Arts and Architecture (ART), Technics (TECH).**

5.2 EXAMPLES OF FOREIGN MULTI-SUBJECT AND SUBJECT GATEWAYS

Intute, http://www.intute.ac.uk

BUBL, http://bubl.ac.uk

ipl2 = the Internet Public Library (IPL) and the Librarians' Internet Index (LII), http://www.ipl.org

AcademicInfo, http://www.academicinfo.net

SciCentral : **Gateway to the best science news sources,** http://www.scicentral.com/index.html

LawLinks, http://www.kent.ac.uk/lawlinks

MathGuide, http://www.mathguide.de

Moving Image Gateway, http://www.bufvc.ac.uk/gateway

6 SERVICES FOR THE SEARCH FOR SCIENTIFIC LITERATURE ON THE INTERNET

Google Scholar Searches for scientific literature - reviewed scientific articles, books, abstracts, preprints, dissertations etc.

Scirus: for scientific information only Searches for scientific articles, preprints, books, conferences, patents, dissertations, websites of scientific institutions and workers etc.

CiteSeerX

7 INTERNET ARCHIVING

At the end we would like to mention two examples of projects which have been created due to the need to archive and preserve vast amounts of electronic sources.

WebArchiv

Its purpose is to collect selected Czech web sources, archive them, ensure their long-term protection and access to them. Due to copyright, unlimited access is possible only in the National Library of the Czech Republic and the Moravian Library.

Internet Archive

Its aim is to archive and enable access to Internet websites and other digital documents of a cultural and historical value. The access to Internet Archive is unlimited.

8 MODULE SUMMARY

In this module you became acquainted with digital libraries, repositories and subject gateways, and have learned what Open Access is and how you may use it.

We believe the module has inspired you to search for other sources related to the area of your scientific interest. And where to search for such sources? Try to browse through the module Information institutions; on the websites of scientific institutions including university libraries you may find links and directories to other suitable sources.

Sharing high-quality information sources is very important to the scientific community; it may help you expand your newly acquired knowledge and actively search for useful sources of information which you might not find at first glance.

Points to remember:

High-quality sources may be free of charge.

Digital repositories (not only of university qualification papers) are a direct way to up-to-date scientific topics.

Subject gateways may help you expand the scope of your knowledge and acquaint you with new information sources.

The development of information technologies may bring other copyright and publishing changes, which will tie up with the current movements Open Access and Creative Commons.