INTRODUCTION TO DIGITAL LIBRARIES

LIS 230

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   The author has a critical approach to current techniques of storage and management of digital information. He suggests new system and independent policy for efficient access and long-term archival storage of digital objects.


   In this work, particular attention is paid to streaming technologies, which should be one of the important sectors of digital libraries. Network and Internet bandwidth is discussed, and efficient technological solution is provided to facilitate the huge data flow in current networks, minimizing traffic conflict issues.

This article presents the past state and relatively current process of automation and
digitization of the Yerevan State University Scientific Library. I think it is useful to have
relevant information of similar interests in foreign countries. The issue of multilingual
support is particularly paid attention in the process of digitization of Armenian libraries.

4.

Here we have an interesting observation of similar goals of philanthropic contribution
of Andrew Carnegie and Bill Gates. Particularly it is explained that Gates reaffirmed the
public library's role as the people's university by providing them online access, and
promoting new potentials of electronic information management. I think this is a useful
article to study the library transformation process from the social aspect, where the huge
potential of electronic libraries is considered, while the traditional libraries remain as
vehicles to lead the society to knowledge.

5.
Dorman, David. “Open Source Software and the Intellectual Commons” ERIC.
This article discusses the utilization of Open Source Software in digital libraries. Its ease of availability and free flow is an advantage for relatively small libraries, which cannot afford the purchase of expensive software. On the other hand, careful approach is demonstrated towards fostering free information access via free means of its manipulation, in sense of securing the society from destructive information.

6.


In this article the author shares his own experience of creating a state-of-the-art digital library in Singapore. The information on project size and implemented systems like digital media repository, the search system, the library system, and the portal is very useful for novices. The importance of portals in a digital library structure is discussed, which aim to provide a one-stop, single-search facility that allows users to simultaneously search multiple resource databases, the digital media repository and the library catalog.

7.

This article explains the structure and working technique of the Open Archives Initiative (OAI) Protocol for Metadata Harvesting and its impact on digital libraries and information retrieval. The dynamics of transferring metadata between servers in the network of information systems promotes flexibility of data control. The administrative issues of controlling the OAI model are also discussed.

8.


<http://search.epnet.com/direct.asp?an=EJ654059&db=eric>

Here the author explores issues related to the selection and purchase of digital content in academic libraries, including commercially-produced databases, electronic journals, books and other electronic resources that are purchased from vendors. He also discusses the principles of managing standard collection, particularly within the framework of lack of context, incomplete usage data, marketing practices, content variations, effect of interface on use, economic models and privacy.

9.


<http://search.epnet.com/direct.asp?an=EJ657759&db=eric>
This article reviews problems relating to database technology in digital libraries. There is emphasis on resource sharing, other ongoing digital library projects, metadata, user interfaces, and query processing. The key factors of digital library collection management like interoperability, data quality, copyright and managerial implications, including electronic versus printed materials are also discussed.

10.


<http://search.epnet.com/direct.asp?an=ED456865&db=eric>

This represents the history of different projects on digital library initiatives, sponsored by the National Science Foundation and aimed at the establishment of a national digital library for people of various scientific levels. Challenges and opportunities for teachers and librarians are discussed as well. A reader is also provided an overview of financial expenses on those projects.

11.


DOI%2F101081EELIS120008945%2Fmain>
The author reflects on “information revolution” in public libraries and shares his thoughts on their successful response to that. He also speaks about digital services, digital reference, new technologies, collaborative networking and video conferencing, e-books and resource sharing in public libraries.

12.


The article presents the evolutionary process of manifestation of man's knowledge and culture, and how it depends on economic and technological changes. The librarianship has become more important than ever, and the future aspects of digital information management are also designed by contemporary librarians.

13.


This article reflects the advantages, problems and issues on digitizing and archiving theses and dissertations within a university. The main positive factors like ease of access, independence from space limitations, and efficient economic management are considered as stimulus for action in American universities, which is evident in provided statistical data.
14.


In this article there is useful information about the Council on Library Resources (CLIR), which is committed to fostering the development of digital libraries as a resource for research, digital collection development, preservation, data creation and use. It also hosts the Digital Library Federation (DLF), consortium of 29 research libraries that has committed to collaboratively address the above mentioned issues.

15.


The author reflects on contemporary users’ needs for effective tools to rapidly access information stored in digital libraries. He introduces the concept of similarity-based links among hyper-textbooks, where networks of links are generated through a completely automatic and unsupervised procedure. The methodology is presented together with the results of a case study of a working prototype that shows that connecting hyper-textbooks is an efficient way to provide effective retrieval capability.
Here we have the concept of Digital Object Identifier (DOI) as an entire system for "persistent identification and interoperable exchange of intellectual property on digital networks." Several questions about DOI, which is used to identify ownership and track the use of intellectual property in cyberspace, are answered. It is also considered to be "the bar code for intellectual property."

In this article several questions on Metadata Encoding and Transmission Standard (METS) are answered. METS is intended to provide an XML-based language for encapsulating all descriptive, administrative, and structural metadata required for the retrieval, display, management, and preservation of digital library objects.

The author presents what the Metadata Object Description Schema (MODS) is. MODS serves as a bridge between traditional library applications and bibliographic applications that do not use library cataloging or metadata formats.

MODS can carry the major data elements from a MARC record but does not use the MARC tagging that exist in the MARC XML schema. It can be used to translate MARC records into XML, as well as to create original metadata records.

In this article several web sites of digital libraries are presented. Among them is the Association for Computing Machinery (ACM) with its portal, the gateway to ACM's
Digital Library and Guide to Computing Literature. There is presentation of new useful features, including new search capabilities, better visual clarity, and additional user hints.

20.


This is a very useful article related to file size in digital image presentation. There is detailed explanation of considering the monitor size and file output or printing size. The scrolling issue is also considered which is sometimes frustrating for users. The author also speaks about preventing the unauthorized use of images and decreasing download time simply by making appropriate digital file format and resolution.

21.

This article is completely devoted to the digital video content in digital libraries. Particularly the issues of content expanding (from VHS, DVD, or DV-CAM), creating videos, preserving and providing access to end-users are discussed. There is also introduction to MPEG1, MPEG2, MPEG4 video formats, as well as newly MPEG-7 new metadata standard for digital video content.


This is a comprehensive article devoted to cataloging of electronic resources. It provides practical instruction on the application of current cataloging rules for e-material. It will be very useful for catalogers, orienting in digital collections.


The author introduces information and reference services as major components of digital library services. Based on the fact that automatic digital library technologies are
solving more and more information needs and changing the mode of user service, the author emphasizes the role of reference librarians in digital reference service, discussing also the new means of delivering information.

24.


<http://search.epnet.com/direct.asp?an=11189381&db=aph>

This article provides overall outlook to the future of digital libraries in the United States. There are presented authoritative statements affirming the future online availability of the contents of the U.S. Library of Congress to every school child in the country. The massive digitization tendency is described, to put the U.S. libraries online.

25.


The author describes a service for providing literature recommendations, which is a part of a networked digital library project whose goal is to develop technologies for supporting digital services. The proposed literature recommendation system utilizes the Web usage logs of a digital library. The recommendation framework consists of three
sequential steps: data preparation of the Web usage log, discovery of article associations, and article recommendations. I think this is a very useful approach to expand the range of digital library services.