National Knowledge Resource Consortium (NKRC): A Study

Jagjit Singh
Librarian,
Doaba College,
Tanda Road, Jalandhar,
Punjab, India

National Knowledge Resource Consortium (NKRC) provides 5000+ e-journals to the 45 CSIR and 25 DST Institute Libraries and Information Centres of the country. CSIR and DST institute are engaged in research and development of the country. Scientists, Faculty and Researchers used e-journals to develop new research activities in their area of interest. E-journals provide easy access, faster access, easy handling and round the clock availability. The paper gives detailed information about the consortium.

Keywords: NKRC, E-Resources, Consortium, Libraries, CSIR, DST Institute

Introduction

The consortium gives the opportunities to the libraries to provide access a huge number of electronic resources to its users. To provide electronic resources, consortium purchased a large number of electronic resources. The institutions also get the advantages to access electronic resources to pay nominal subscription fee to the consortium. The libraries also get the benefits to build electronic resources collection through

consortium.[1] In the age of information explosion, this is the duty of libraries to provide user need based information with stable budgets, archiving of information which is possible only through consortium and it promotes resource sharing among the libraries.[2] In India, Majority of consortia bound with short-term agreement for better bargain, improved buying capacity, and specially acquire specific type of electronic resources to fulfil users demands. A majority of consortia are driven by publishers, aggregators, technology enabled, commercial targeted and are confined to share electronic resources/bibliographic databases.[3] A consortium generally covers a huge number of e-journals to give access a large number of users with less expenditure. Consortium covers discipline-wise subjects, relevant e-journals, relevant publishers, price value, unlimited number of user access, unlimited downloads, easy accessibility, no geographical restrictions, 24x7 hours accessibility, full-text downloads, etc.[4]

National Knowledge Resource Consortium (NKRC)

The National Knowledge Resource Consortium (NKRC) was established in the year 2009. It is a network of 43 CSIR and 25 DST Institute libraries and information centres. NKRC's beginning goes reverse to the year 2001, when the CSIR set up the Electronic Journals Consortium to provide access to 1200 odd journals of Elsevier Science to all its members. The consortium grew in number of resources as well as users and as more like-minded institute evinced interest to join the Consortium. At present, NKRC facilitates access to 5,000+ e-journals of all major publishers, patents, standards, citation and bibliographic databases. Apart from

2

licensed resources, NKRC is also a single point entity that provides its users with access to a multitude of open access resources. The Consortium envisions emerging as a leader to serve the Research & Development sector with much needed information to strengthen the research and development system in the country.[5]

Members of the Consortium[6]

Following are the members of the consortium

Table 1: Consortium Members

Sr. No.	CSIR Institutions
1.	CSIR-AMPRI Advanced Materials And Processes Research Institute , Hoshangabad Road , Near Habibganj Naka, Bhopal-462026 , http://www.ampri.res.in/
2.	CSIR-CBRI Central Building Research Institute, Roorkee-247667 , http://www.cbri.res.in
3.	CSIR-CCMB Centre for Cellular and Molecular Biology, Uppal Road, Hyderabad-500007 , http://www.ccmb.res.in/
4.	CSIR-CDRI Central Drug Research Institute, Sec-10, Jankipuram Extn., Sitapur road, Lucknow-

3

	226031 ,	
	http://www.cdriindia.org/	
5.	CSIR-CECR	
	Central Electrochemical Research Institute, Karaikudi-630006 ,	
	http://www.cecri.res.in/	
6.	CSIR-CEERI	
	Central Electronics Engineering Research Institute, Knowledge Resource Center (KRC), CSIR-CEERI Pilani-333031 ,	
	http://www.ceeri.res.in/	
7.	CSIR-CFTRI	
	Central Food Technological Research Institute, Mysore-570020 ,	
	http://www.cftri.com/	
8.	CSIR-CGCRI	
	Central Glass & ceramic Research Institute, 196, Raja S C Mullick Road, Kolkata-700032 ,	
	http://www.cgcri.res.in	
9.	CSIR-CIMAP	
	Central Institute of Medicinal & Aromatic Plants, P.O. CIMAP, Near Kukrail Picnic Spot, Lucknow-226015 ,	
	http://www.cimap.res.in/	
10.	CSIR-CIMFR	
	Central Institute of Mining and Fuel Research, Dhanbad-826015 JHARKHAND, India. ,	
	www.cimfr.nic.in	

11.	CSIR-CLRI Central Leather Research Institute, Sardar Patel Road, Adyar, Chennai-600020 , http://www.clri.org/Index.aspx
12.	CSIR-CMERI Central Mechanical Engineering Research Institute, Mahatma Gandhi Avenue, Durgapur-713209 , http://www.cmeri.res.in/
13.	CSIR-CRRI Central Road Research Institute, Delhi-Mathura Road,P.O. CRRI,New Delhi-110025 , http://www.crridom.gov.in/
14.	CSIR-CSIO Central Scientific Instruments Organisation, Sector 30-C, Chandigarh-160030 , http://www.csio.res.in/
15.	CSIR-CSIR-HQ Council of Scientific and Industrial Research, Anusandhan Bhavan, 2 Rafi Ahmed Kidwai Marg, New Delhi-110001 , http://www.csir.res.in/
16.	CSIR-CSIRM CSIR Madras Complex, Taramani P.O., Chennai-600113 , http://www.csircmc.res.in/
17.	CSIR-CSMCRI Central Salt & Marine Chemicals Research Institute, Gijubhai Badheka Marg, Bhavnagar-364002 ,

	http://www.csmcri.org/
18.	CSIR-HRDC Human Resource Development Centre, Sector 19, Central Government Enclave, Kamla Nehru Nagar, Ghaziabad-201002 , http://www.csirhrdc.res.in/
19.	CSIR-HRDG Human Resource Development Group, CSIR Complex, Pusa, New Delhi-110012 , http://csirhrdg.res.in/
20.	CSIR-IGIB Institute of Genomics & Integrative Biology, 1) North Campus, Mall Road, Delhi-110007 ; 2) South Campus,Mathura Road(Near Sukhdev Vihar Depot),New Delhi-110020 , http://www.igib.res.in/
21.	CSIR-IHBT Institute of Himalayan Bioresources Technology, Post Box No. 6, Palampur-176061 , http://www.ihbt.res.in/
22.	CSIR-IICB Indian Institute of Chemical Biology, 4, Raja SC Mullick Road,Jadavpur,Kolkata-700032 , http://www.iicb.res.in/
23.	CSIR-IICT Indian Institute of Chemical Technology, Uppal Road,Hyderabad-500007 , http://www.iictindia.org/

24.	CSIR-IIIM
	Indian Institute of Integrative Medicine, Canal Road, Jammu-180001 , http://www.iiim.res.in/
25.	CSIR-IIP
	Indian Institute of Petroleum, P.O. IIP, Haridwar Road Mohkampur, Dehradun-248005 , http://www.iip.res.in
26.	CSIR-IITR
	Indian Institute of Toxicology Research, Post Box No. 80, VISH VIGYAN BHAVAN, 31,Mahatma Gandhi Marg Lucknow-226001 , http://www.iitrindia.org/
27.	CSIR-IMMT
	Institute of Minerals and Materials Technology, Bhubaneswar-751013 , http://www.immt.res.in/
28.	CSIR-IMTECH
	Institute of Microbial Technology, Sector 39-A, Chandigarh-160036 , http://www.imtech.res.in/
29.	CSIR-NAL
	National Aerospace Laboratories, PB 1779,Old Airport Road, Kodihalli, Bangalore-560017 , http://www.nal.res.in/
30.	CSIR-NBRI

	National Botanical Research Institute, Rana Pratap Marg, Post Box No. 436,Lucknow-26001 , http://www.nbri.res.in/
31.	CSIR-NCL National Chemical Laboratory, Dr. Homi Bhabha Road, Pune-411 008, India , http://www.ncl-india.org/index.jsp
32.	CSIR-NEERI National Environmental Engineering Research Institute, CSIR-NEERI,Nehru Marg, Nagpur-440020 , http://www.neeri.res.in
33.	CSIR-NEIST North East Institute of Science & Technology, Jorhat-785006 , http://www.neist.res.in
34.	CSIR-NGRI National Geophysical Research Institute, Uppal Road, Hyderabad-500007 , http://www.ngri.org.in/
35.	CSIR-NIIST National Institute for Interdisciplinary Science & Technology, Industrial Estate P.O., Pappanamcode, Thiruvananthapuram-695019 , http://www.niist.res.in
36.	CSIR-NIO

	National Institute of Oceanography, Dona Paula, Goa-403004 , http://www.nio.org/
37.	CSIR-NISCAIR National Institute of Science Communication & Information Resources, 14, Satsang Vihar Marg, New Delhi-110067 , http://www.niscair.res.in/
38.	CSIR-NISTADS National Institute of Science Technology and Development Studies, Dr. KS Krishnan Marg, Pusa Gate, New Delhi-110012 , http://www.nistads.res.in/
39.	CSIR-NML National Metallurgical Laboratory, Jamshedpur-831007 , http://www.nmlindia.org/
40.	CSIR-NPL National Physical Laboratory, Dr KS Krishnan Marg, New Delhi-110012 , http://www.nplindia.org/
41.	CSIR-SERC Structural Engineering Research Centre, CSIR Campus, CSIR Road, TTTI Taramani, Post Bag No. 8287, Chennai-600113 , http://www.serc.res.in
42.	CSIR-URDIP

9

	Unit for R&D for information Products - URDIP, NCL Campus S.No.113,114 Pashan Pune 411 008 , http://www.urdip.res.in/
	DST Institutions
1.	ARCI International Advanced Research Centre for Powder Metallurgy and New Materials , Balapur P.O., Hyderabad-500005 , http://www.arci.res.i
2.	ARI Agarkar Research Institute, Agharkar Research Institute, Gopal Ganesh Agarkar Road, Pune-411004 , http://www.aripune.org
3.	ARIES Aryabhatta Research Institute of Observational-Sciences, Manora Peak, Nainital-263001 , http://www.aries.res.in
4.	BI Bose Institute, 93/1 A.P.C. Road, Kolkata-700009 , http://www.boseinst.ernet.in
5.	BSIP Birbal Sahani Institute of Paleobotany, 53 University Road, Lucknow-226007 , http://www.bsip.res.in
6.	CEFIPRA

	Indo-French Centre for the Promotion of Advanced Research, 5B, Ground Floor, Indian Habitat Centre Lodhi Road, New Delhi-110003 , http://www.cefipra.org/
7.	CeNS Center for Nano and Soft Matter Sciences, P.O. Box 1329, Prof. U. R. Rao Road, Jalahalli, Bangalore 560013 , http://www.cens.res.in
8.	DST Department of Science and Technology, Technology Bhavan, New Mehraulli Road, New Delhi- 110016 , http://dst.gov.in/
9.	IACS Indian Association for the Cultivation of Science, 2A&B, Raja S.C. Mallick Road, Kolkata-700032 , http://www.iacs.res.in
10.	IAS Indian Academy of Sciences, C.V. Raman Avenue, Sadashivanagar,Post Box No. 8005, Bengaluru 560080 , http://www.ias.ac.in
11.	IASST Institute of Advanced Study in Science & Technology, Vigyan Path, Paschim Boragaon, Garchuk,

	Guwahati-781035 , http://www.iasst.gov.in
12.	IIAP Indian Institute of Astrophysics, 2nd Block, Koramanagala, Bangalore- 560034 Karnataka, India , http://www.iiap.res.in
13.	IIGM Indian Institute of Geomagnetism, Kalamboli-Panvel Highway, New Panvel, Navi Mumbai-410218 , http://www.iigm.res.in
14.	INAE Indian National Academy of Engineering, 6th Floor,Vishwakarma Bhawan,Shaheed Jeet Singh Marg,New Delhi-110016 , http://www.inae.in
15.	INSA Indian National Science Academy, Bahadur Shah Zafar Marg, New Delhi-110002 , http://www.insa.nic.in; www.insaindia.res.in; www.insajournal.in
16.	INST Institute of Nano Science and Technology, Institute of Nano Science and Technology, Sector-64, Phase - X, Mohali - 160062 Punjab, INDIA , http://www.inst.ac.in/
17.	ISCA

	Indian Science Congress Association, 14, Dr. Biresh Guha Street, Kolkata-700017 , http://www.sciencecongress.nic.in
18.	JNCASR Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur P.O., Bangalore-560064 , http://www.jncasr.ac.in
19.	NASI National Academy of Sciences India, 5, Lajpatrai Road, New Katra, Allahabad-211002 , http://www.nasi.nic.in
20.	RRI Raman Research Institute, C. V. Raman Avenue, Sadashivnagar P.O., Bangalore-560080 , http://www.rri.res.in
21.	SCTIMST Sree Chitra Tirunal Institute for Medical Sciences & Technology, Thiruvananthapuram-695011 , http://www.sctimst.ac.in
22.	SNBNCBS S N Bose National Centre For Basic Sciences, Block JD,Sector III, Salt Lake, Kolkata-700098 , http://boson.bose.res.in
23.	TIFAC Technology Information, Forecasting & Assessment

	Council, Vishwakarma Bhavan, A-Wing, Shaheed Jeet Singh Marg, New Delhi-110016 , http://www.tifac.org.in	
24.	Vigyan Prasar Vigyan Prasar, A-50, Institutional Area, Sector 52, Noida-201307 , http://www.vigyanprasar.gov.in	
25.	WIHG Wadia Institute of Himalayan Geology, 33 Gen. Mahadeo Singh Road, Dehradun-248001 , http://www.wihg.res.in/	

Consortium E-Resources[7]

Following e-resources available by the consortium

Table 2: Consortium Electronic Resources

Sr. No.	Publisher Name	Number of Journals
1.	American Chemical Society	40 journals
2.	Association for Computing Machinery	1577 journals
3.	American Institute of Physics	18 journals
4.	Annual Reviews	30 journals
5.	American Society of Civil Engineers	31 journals
6.	American Society of Mechanical Engineers	23 journals
7.	American Society for Testing	1 journal

14

	Materials	
8.	Cambridge university Press	87 journals
9.	CSIRO	25 journals
10.	Elsevier	1866 journals
11.	Emerald	144 journals
12.	Institute of Civil Engineers	23 journals
13.	Institute of Electrical and Electronics Engineers	151 journals
14.	Indian Journals	211 journals
15.	Institute of Physics	59 journals
16.	Maney Publishing	27 journals
17.	Nature Publishing Group	34 journals
18.	Optical Society of America	16 journals
19.	Oxford University Press	99 journals
20.	NRC Press	16 journals
21.	Royal Society of Chemistry	73 journals
22.	Sage Publishers	102 journals
23.	Springer	2019 journals
24.	Taylor & Francis	471 journals
25.	Wiley & Blackwell	754 journals
26.	WorldScientific	41 journals

Conclusion

NKRC fulfils the users demand in the fields of research and development of the country. NKRC provides reputed e-journals to the scientific community of the country to develop new ideas in the field of their interest area. NKRC e-journals covered a huge area of scientific research and satisfy scientific community of the country.

15

References

1. *Murthy, T. A. V. (2006). UGC-Infonet E-journal consortium for universities and colleges An indian experience. Library Herald, (44) 1, 1-13.*

2. *Bhardwaj, R. K. (2006). A Study on Library Consortia in Science and Technology: Problems and Prospects. Library Herald, (44) 1, 74-81.*

3. *Siddamallaiah, H. S., & Butdisuwan, S. (2009). HELLIS network: Not just a consortium of e-resources. DESIDOC Journal of Library & Information Technology, 29 (5), 12-17.*

4. *Visakhi, P. (2009). Consortium for e-Resources in Agriculture. DESIDOC Journal of Library & Information Technology, 29 (5), 12-17.*

5. *http://nkrc.niscair.res.in/indexpage.php accessed on 1-11-2019*

6. *http://nkrc.niscair.res.in/OnlineJournal.php?publisher=ACS accessed on 1-11-2019*

7. *http://nkrc.niscair.res.in/OnlineJournal.php accessed on 06-11-2019*

Cloud Computing for Library Services in India

Vrij Kishor Mishra
Assistant Professor
Deptt.of Library and Information Science
DBS College
Kanpur, U.P., India

Gitesh kumar Gupta
Assistant Professor
Deptt.of Commerce
Vidyant Hindu P.G. College,
Lucknow, U.P., India

Introduction

Today we are living in the age of information technology. Information technology play very vital role in library and information services. Cloud computing is a new technology model for IT services which many businesses and organizations are adopting. It allows them to avoid locally hosting multiple servers and equipment and constantly dealing with hardware failure, software installs, upgrades and compatibility issues. For many organizations, cloud computing can simplify processes and save time and money. This article defines cloud computing and shows how it is different from other types of computing. It also discusses how cloud

computing solutions could be beneficial to library services. In this paper, an attempt has been made to give an overview of this technology, applications, benefits and the areas in which libraries can deploy this technology for providing services.

Meaning

Cloud computing is a growing trend and new phase and platform of library services and resource sharing in digital environment. The rapid growth of information technology has led to development of network based services like cloud computing. Cloud computing is working just like an electricity grid. Cloud computing is helpful of storing, accessing, sharing data, applications and computing power in web space. Thus, it is the web based service where the software system designed to support interoperable machine-to-machine interaction over a network. It makes services much easier as one need not be physically present within the one campus. It is a model of service delivery and access where scalable and virtualized resources are provided as a service over the internet.For collection, Storage, organization, processing, analysis of information.In this field facing many challenges in the applications of IT.

Figure Cloud Computing Definition (Wikipedia)

Cloud computing system can be divided it into two sections: the front end and the back end. They connect to each other through a network, usually the Internet. The front end is the side the computer user, or client, sees. The back end is the "cloud" section of the system. On the back end there are various computers, servers and data storage systems that create the "cloud" of computing services. A central server administers the system, monitoring traffic and client demands to ensure everything runs smoothly. It follows a set of rules called protocols Servers and remote computers do most of the work and store the data.

Cloud computing is a growing trend and new phase and platform of library services and resource sharing in digital environment. The rapid growth of information technology has led to development of network based services like cloud computing. Cloud computing is working just like an electricity grid. Cloud computing is helpful of storing, accessing, sharing data, applications and computing power in web space. Thus, it is the web based service where the software system designed to support interoperable machine-to-machine interaction over a

network. It makes services much easier as one need not be physically present within the one campus. It is a model of service delivery and access where scalable and virtualized resources are provided as a service over the internet.

Deployment Models of Cloud Computing

A cloud deployment model (Dustin Amrhein et al., 2010, CSA, 2009) represents a specific type of cloud environment and it is classified on the basis of ownership and size. There are so many models of cloud but the common models of clouds are:-

Public Cloud

In this deployment the cloud infrastructure is accessible to general public and shared in a "pay as you go" model of payment. The cloud resources are accessible via the internet and the provider is responsible for ensuring the economies of scale and the management of the shared infrastructure. It is highly scalable and automated provisioning of commodity computer resource. The Google App Engine, Microsoft windows Azure, IBM Smart Cloud and Amazon EC2 are example of Public Cloud.

Figure show the structural formation of a public cloud.
(Dustin Amrhein et al., 2010)

20

In this type of cloud, the organization does not access or use the public cloud which is accessible to the general public.

Private Cloud

In this model, the cloud resources are not shared by unknown third parties. The cloud resources in this model may be located within the client organisation premises or offsite. In this model the clients' security and compliance requirements are not affected though this offering does not bring the benefits associated with reduced capital expenditure in IT infrastructure investments. In this type of cloud neither the general public have an access to the private cloud nor the organisation use the public cloud.
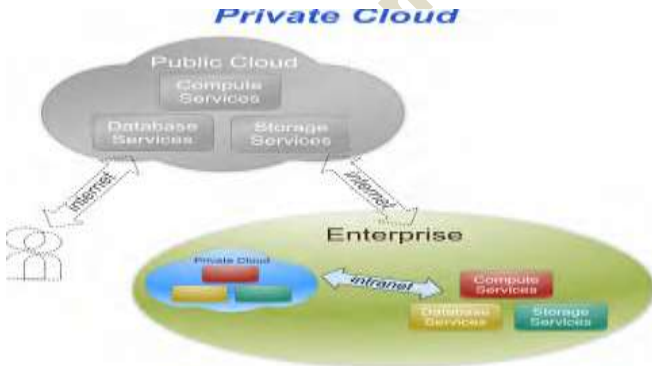
Figure shows the structural formation of a private cloud.
(Dustin Amrhein et al., 2010)

Hybrid Cloud

Hybrid cloud as its name implies, is a model of deployment which combines different clouds; for example the private and public clouds. In this model the combined clouds

21

retains their identities but, are bound together "by standardised or proprietary technology" (CSA, 2009).
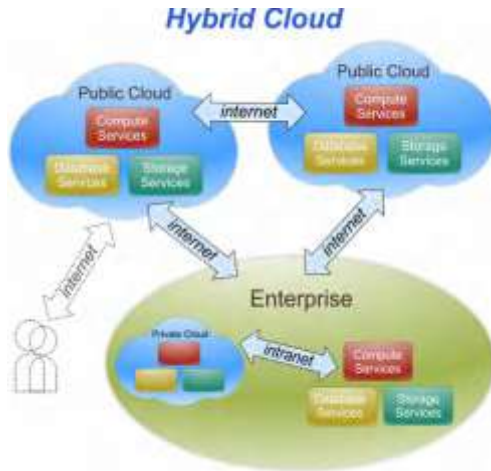
Figure shows the structural formation of hybrid cloud
(Dustin Amrhein et al., 2010)

In this type of cloud the general public does not have access to the cloud, but the organisation uses infrastructure in both the public and private cloud.

Community Cloud

Community Cloud is the fourth deployment model that can be used to deliver cloud computing services. In this model the cloud infrastructure is shared by multiple organisations or institutions that have a shared concern or interest such as compliance considerations, security requirements. This type of cloud may be managed by the organisation or by a third party and may be located on-premises or off-premises.

22
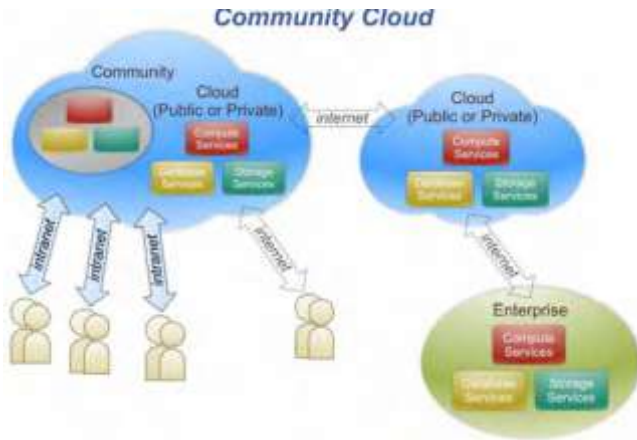
Figure shows the structural formation of community cloud.

(Dustin Amrhein et al., 2010)

In this type of cloud both the public and the organizations forming the community cloud have access to the cloud services offered by the community cloud.

Cloud Service/ Delivery Model

All web-based applications or service offered via cloud computing is called a cloud service. Almost all large computing companies today, from Google to Amazon to Microsoft, are developing various types of cloud services. Cloud computing is an umbrella term used to refer to internet based development and services. A cloud client consists of computer hardware and or computer software that relies on cloud computing for application delivery.

Cloud computing services can be broadly classified into three *ass, i.e three layers of cloud stack also known as cloud service models: Saas, Paas, Iaas

23

Figure show the architecture of Cloud Services
Software as a Service (SaaS)

The capability provided to the consumer is to use the provider's applications running on a cloud infrastructure. Cloud In this deployment the cloud infrastructure is accessible to general public and shared in a "pay as you go" model of payment. The cloud resources are accessible via the internet and the provider is responsible for ensuring the economies of scale and the management of the shared infrastructure. It is highly scalable and automated provisioning of commodity computer resource. of Public Cloud.
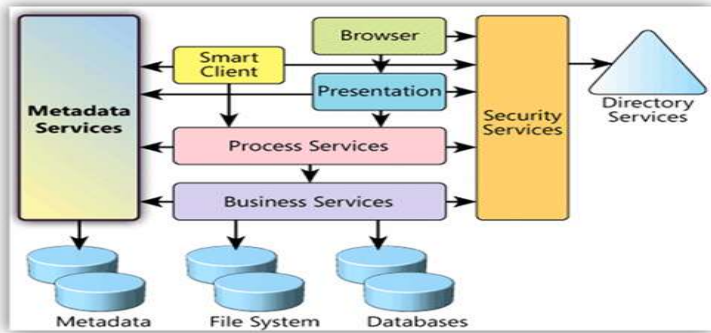
Figure show the Saas architecture

24

Platform as a Service (PaaS)

The capability provided to the consumer is to deploy on the cloud infrastructure consumer-created or acquired applications, created using programming languages, library services and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly application hosting environment configurations. Google App Engine, Microsoft Azure Services, Amazon SimpleDB, CloudFoundry are well known Platform as a Service.
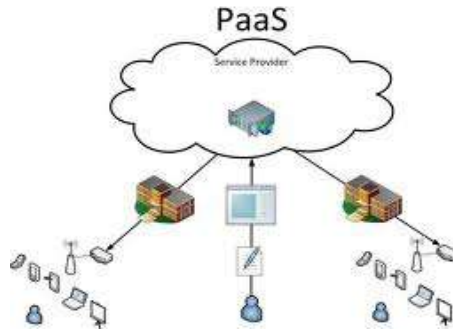
Figure show the PaaS architecture

Infrastructure as a Service (IaaS)

The provision of processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. It does not manage or control the under cloud infrastructure but has control all over operating systems.
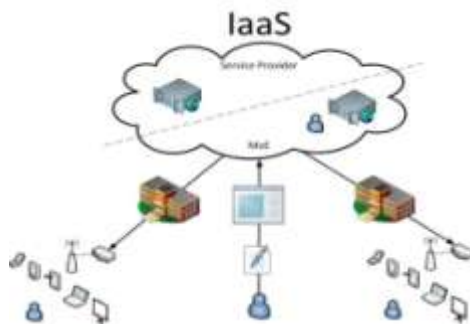
25

Figure show the IaaS architecture

Use Cloud Computing in Library and Information Science

Cloud computing offers many interesting possibilities for libraries that may help to reduce technology cost and increase capacity reliability, and performance for some type of automation activities. Cloud computing has made strong inroads into other commercial sectors and is now beginning to find more application in library science. The cloud computing pushes hardware to more abstract levels. Most of us are acquainted with fast computing power being delivered from systems that we can see and touch.

Role of Cloud Computing in Libraries

Cloud computing is a completely new in technology and it is known as 3rd revolution after PC and Internet. Cloud computing is an enhancement of distributed computing, parallel computing, grid computing and distributed databases. Among these, grid and utility computing are known as predecessors of cloud computing.Cloud computing has large potential for libraries.

Libraries may put more and more content into the loud. Using cloud computing user would be able to browse a

26

physical shelf of books, CDs or DVDs or choose to take out an item or scan a bar code into his mobile device. All historical and rare documents would be scanned into a comprehensive, easily searchable database and would be accessible to any researcher. Many libraries already have online catalogues and share bibliographic data with OCLC. More frequent online catalogues are linked to consortium that share resources.International Journal of Digital Library Services, Data storage cloud be a main function of libraries, particularly those with digital collections storing large digital files can stress local server infrastructures. The files need to be backed up, maintained, and reproduced for patrons. This can strain the data integrity as well as hog bandwidth. Moving data to the cloud may be a leap of faith for some library professionals.

Anew technology and on the surface it is believed that library would have some control over this data or collections. However, with faster retrieval times for requests and local server space it could improve storage solutions for libraries. Cloud computing or IT infrastructure that exists remotely , often gives users increased capacity and less need for updates and maintenance , and has gained wider acceptance among librarians

Service Providers of Cloud Computing in Library
Dura Cloud

Dura cloud is associated with the Duraspace those exist after merging of Fedora ad Dspace. Fedora is a good digital repository or just like a digital library with the high class software and hardware solution. Dura cloud is especially for digital library services. Dura cloud provides open source code

27

and the code needs to be installed on your machine and its cost is nominal.

Ex Libris

It is a very famous service provider in USA. Ex Libris is providing cloud solution in the field of library with all the software and hardware support needed to provide services to the users. It is built on various standard and contains number of features like compatibility with Unicode font, flexibility, migration of data, customization etc.

Polaris Library System

It is the cloud based library automation system available in the open market. Company also provides standard acquisition and processing system. Due to Polaries ILS client License, the library can integrate various PC and print management systems at not another cost. The systems uses number of well know standards like MARC-21, XML, Z39.50 for information retrieval, Unicode etc.

OCLC's Webscale

OCLC has set an example for making use of cloud computing for libraries. OCLC has been functioning as a cloud computing vendor because they provide cataloguing tools over the internet and allow member institutions to draw on their centralised data store. Now, OCLC has geared to implement the plan of library management systems on the cloud in which OCLC has web-scale delivery and circulation, print and electronic acquisitions, cataloguing and license management components. Its world-share management services (WMS) allows libraries to manage entire collection management life cycle in a cloud-based application. The overall purpose of web-

28

scale sharing resources, data, and innovation is supported by a variety of features that work together to save money, promote community development and drive better services for library users.

In other words, one can say OCLC provide cost benefits for libraries and efficiencies not possible when utilizing disparate, specialised systems. The service promises to include privacy, security, scalability and technical support.

Advantages of Cloud computing in libraries

1. Cost saving
2. Flexibility and innovation
3. User centric
4. Openness
5. Transparency
6. Interoperability
7. Representation
8. Availability anytime anywhere
9. Connect and Converse
10. Create and collaborate

Disadvantages of Cloud computing in libraries:

1. Risk or data loss
2. Failure in compliance
3. Constant connectivity required
4. Dependency
5. Quality problems with cloud service provider
6. Time and Budget Constraints
7. Since all the development and deployment have been done by Cloud service provider, it is very difficult to get good grip on overall system.

Beyond library discovery services

It is here that libraries can look to gain new efficiencies both internally and among theentire library community. When library software suppliers create the user personas thatwill use their software the focus is generally on external personas but there are also many internal personas that need to take advantage of new technologies and Web capabilities.One such example has been given with reference librarians now able to both better assisttheir patrons online but also to build a large network of librarians globally who can answerspecific questions and be available 24/7. What other personas in the library can benefit from cloud solutions?.

What can cloud computing solutions do for libraries?

Cloud computing solved the real problems of the libraries. The library community can apply the concept of cloud computing to power of cooperation and to build a significant, presence on the Web.

This approach to computing can help libraries.

A brief list of potential areas of improvement could include:

Most library computer systems are built on Systems distributed across pre-Web technology .the data scatter across distributed systems the difficult and expensive. Information seekers work in common Web environments and distributed systems make it difficult to get the library into their Many systems are only used to 10% of their capacity.

A significant, unified presence on the Web. This approach to computing can help libraries save time and money while simplifying workflows.

SWOT Analysis of Cloud Computing with a view to Indian Libraries

Analysis is a strategic planning method usedto evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a projector in any venture. It involves specifying theobjective of the project and identifying the internal and external factors that are favourable andunfavourable to achieve the objective.

Strengths

India has a particularly strong ITindustry that can be an important commercialfactor for the western countries to consider in theirfuture cloud related development. Accordingly, anIndian library does not have the economic strengthto impact on the western countries. The mainstrength and hence advantage of India, however, consists in its consolidated and synergetic efforts to address new technological innovations, trends and governmental issues. As India has strong IT industry now, up-coming Indian companies are offering cloud services for Indian libraries at affordable prices. Moreover in India many institutes are not in condition to purchase high end server and costly software for their library, in this situation the cloud computing will provide grate platform to host their data on cloud to serve their users.

Weakness

However, India is not as fast as US and Europe in the development and considering the timelines of research to reach market-readiness as opposed to the fast movements in the market itself. The time is a critical resource with respect to positioning India in the global cloud development market.

31

Implementation of cloud in the libraries is not easy task as there are many administrative and financial matters involved. Adopting cloud services means we have to be depending on the service provider. Many Indian libraries does not have even internet connection to connect with the cloud, in this case, it is very difficult to implement cloud based services.

Opportunities

India is an emerging market for IT industry and, Indian government is also providing help to Indian university libraries to get high speed internet connection for research purpose, in view of these libraries/institutions/universities can consider cloud based library services to serve their users. Using cloud computing libraries can offer modern information services in user friendly format. With the use of these advanced technology library staff can also get an opportunity to learn new technological changes occurred in the field. As the cloud is athird party service if, any problem occurs, then the experts will provide the quick solution withoutinterrupting library services.

Threats

These opportunities are obviously counterweighted by some threats that particularly relate to the effort involved in the implementation. The threats namely connectivity problem, hidden cost for add-on services by service provider, compatibility, lock in period etc. The most important is migration of data from one service provider to other is a very difficult task.

References

1. *C. L. Giles, K. Bollacker, S. Lawrence, "An automatic citation indexing system, ACM Conference on Digital Libraries", 199887(21), 2002, 10-14.*

2. *D. Borthakur. "The haoop distributed file system: Architecture and design", Hadoop Project Website, 2007.*

3. *M. CHAWLA. "PCQuest: Top Stories: Demystifying Cloud Computing". PCQuest Online Computer Magazine, Latest Computer Technology News, Updates and Articles IT Magazine in India, 2011. Retrieved December 31, 2013, from http://pcquest.ciol.com/content/topstories/ 2010/110080102.asp*

4. *G. Councill,"Towards Next Generation CiteSeer: A Flexible Architecture for DigitalLibrary Deployment", ECDL, 2006.*

5. *G. Councill, C. L. Giles, M-Yen. Kan, "Parscit: An open-source CRFreference string parsing package", In Proceedings of LERC, 2008.*

6. *E. A. Fox, M. A. Robert, R. K. Furuta, J. J. Leggett, Digital libraries, Commun. ACM, 38-4, 1995.*

7. *KROSKIi, E. (n.d.). "The Running Librarian: Cloud Computing in Libraries". The Running Librarian. Retrieved December 31, 2011, from http://www.therunninglibrarian.co.uk/ 2010/12/cloud-computing-in-libraries.html*

8. *M. Armbrust, (et. All) "The Clouds: A Berkeley View of Cloud Computing, Technical ReportNo. UCB/EECS-2009-28, University of California at Berkley, 2009.*

9.   PERERS, C."What is Cloud Computing and How will it Affect Libraries?".,2010 Retrieved December 31, 2011, from http:// techsoupforlibraries.org/blog/what-is-cloudcomputing- and-how-will-it-affect-libraries

10.   S. Chakrabarti, M. Van den Berg, B. Dom. "Focused crawling: a newapproach to topic-specific web resource discovery", Computer Networks, Vol. 31 Number 11-16, 1999.

11.   S. Ghemawat, H. Gobioff, S.T. Leung, The Google File System, ACMSIGOPS Operating Systems Review, Vol. 37, Num. 5, 2003.

12.   W.Y. Arms, C. Blanchi, E.A. Overly, V. Reston, "An Architecture forInformation in Digital Libraries", D-Lib Magazine, 1997

13.   http://www.slideshare.net/goodfriday/amazon-web-services-building-a-webscale   computing   architecture. Retrieved December 30, 2013

14.   Perers, C (2010) What is cloud computing and How will it Affected   Libraries?   Available   at http://techsoupforlibraries.org/blog/what-is-cloud-computing-and-how-will-it-affect-libraries   (Access   on 1/11/2013)

15.   Chawla, M(2011) PcQuest: Top Stories : Demystifying Cloud   Computing   .   Available   at http://pcquest.ciol.com/content/topstories/2010/110080102.asp (Access on 1/11/2013)

16.   Dura Cloud. Available at http://duracloud.org (Access on 1/11/2013)

17. *Ex Libris: The Bridge of Knowledge. Available at http://www.exlibris.co.il (Access on 1/02/2013)*

18. *Polaris Library System. http://www.gisinfosystem.com (Access on 1/11/2013)*

19. *Liz Eversoll. Available at http://www.lizeversoll.com/2011/02/13/swot-strength-weakness-opportunities-threats (Access on 15/11/2013)*

20. *Kumar, PSG (2010) Management of Library and Information Centres, New Delhi: B R Publication. P. 362-366.*

21. *Antonopou and Gillam, Lee (2010) Cloud Computing: Principles, Systems and Applications, London: Springer. Available on http://books.google.co.in/books?id=SbSbdkqibwIC&printsec=frontcover&dq=cloud+computing&hl=en&sa=X&ei=uwSeUl29J4rrrQeq3YCQCg&ved=0CDkQ6AEwAA#v=onepage&q=cloud%20computing&f=false (Access on 15/11/2013)*

22. *Velte, Anthony T., Velte, Toby J. and Elsenpeter, Robert (2010) Cloud Computing: A Practical Approach, New Delhi: Tata McGraw- Hill. P.3-11*

23. *Baun, Christian et al (2011) Cloud Computing: Web Based Dynamic IT Services; New York: Springer. P.10-22.*

24. *Neeraj Kumar (2013) Cloud Computing for Academic Libraries: A SWOT Analysis. Proceeding in International Conference on Academic Library (ICAL-2013) at New Delhi: Guru Gobind Singh Indraprastha University.*

35

Online Electronic Database Systems: The Digital Revolution

Sanjeev Kumar Gupta
Associate Professor and Head,
Department of Botany
Govt. Degree College Billawar,
Jammu & Kashmir, India

Introduction

These are large collections of machine readable data that are usually maintained by commercial agencies and are accessed through communication networks. In an electronic database electronic resources are integrated in highly organized manner. It is a regularly updated file of digitized information like bibliographic records, abstracts, full-text documents, statistical data, directory entries, images, audio visual information and so on which are related to a specific subject consisting of records of uniform format organized for ease of search and retrieval, and managed with the aid of database management system software. The content in the form of data or information is created by the database producer which usually publishes a print version and may lease the content to one or more database vendors that provide electronic access to the data after it has been converted to machine readable form usually on CD-ROM or online via internet by using proprietary search software. The

36

chambers science and technology Dictionary defines database as a collection of structured data independent of any particular application. The appearance of online electronic databases opened new vistas for easy, rapid and reliable search and retrieval of essential knowledge through network based information retrieval systems. The online databases provide access to those digitalized resources that are not generally available on the world wide web (www). The essence of a database is that it is actually an integrated collection of information logically arranged in a far located central computer system with which users can communicate through communication networks. The beauty of an electronic database is that it can be accessed anywhere from a far-off place where users need not go to the library seeking information of their specialized subject. Moyo (2004) identifies online databases "virtual library patron" as-one whose accesses or use of library services and resources is unbounded by space or time. The online databases of present time essentially work on time-sharing and real-time modes inorder to enable the users an easy access of information simultaneously by interacting directly with host computer. The fundamental genesis of online database is its composition into records which are further divided into a number of fields like author and title etc for the purpose of categorization, searching and retrieval of information of choice. The online databases initially used to provide bibliographic information and then evolved to provide full-text information and hence also designated as full-text online databases. These are actually the vast, updated repository and

37

disseminator of essential information in the form of abstracts, full-text references or citations on general or specific field of knowledge. Therefore, these are the online sources of information on different fields of study with greater ease, accuracy and speed. The online databases can be general, multidisciplinary or subject specific in scope. It is pertinent to mention that in these times online databases are also an important medium of the knowledge resources provided by the universities and other institutions of research in many countries. As such they can be a valuable and up to date source of much needed information in the teaching-learning of higher educational institutions besides acting as a much needed support in the research work. The provision of up to date scholarly information facilitates the improvement in quality of education and research base across the educational and research institutions. It has been seen that the scholars of such institutions are becoming accustomed to the use of the online database to speedy access of much needed information. It has become a vital source of different types of electronic documents such as books, scholarly research journals, theses, reviews, official documents and so on. Therefore, the databases also provide various types of information for serving the academic and research community throughout the world and users may possibly need to pay an amount of money to subscribe it. The databases invariably vary from the each other in terms of content and other details of functionality. However, they share the general features of purpose in knowledge sharing.

Popular Online Electronic Databases	
SCIENCEDIRECT	It provides access to journal articles and book chapters published in the 24 fields of science, technology and medicine.
WEB OF SCIENCE	Web of Science is a journal indexing database, as well as a cited reference index, which is used for retrieving accurate citation counts
SCOPUS	Scopus is both a citation and an abstracting database indexing both peer reviewed literature and quality web sources.
MEDLINE	It is the world's most comprehensive source of life sciences and biomedical bibliographic information.
ACADEMIC SEARCH PREMIER	This database provides multidisciplinary journal coverage with full-text information.
ACCESS MEDICINE	This database provides access to more than 60 online medical books, diagnostic tools, drug information and self-evaluation tools.
BUSINESS SOURCE PREMIER	The database provides journal coverage in the areas of management, economics, finance, accounting and international business.

Features of Online Electronic Databases

The typical features of online electronic database which make them ideal information repository and disseminator banks are as such.

Organized Content

In an online database, contents are arranged logically to facilitate easy access and retrieval. Documents in such types of systems are organized in a suitable manner for carrying out easy and fast retrieval of information.

Credibility

In online databases, recorded contents of information are reviewed by subject experts and publishers to maintain credibility and authenticity of the resources. The contents of database are finely evaluated in terms of their accuracy and credibility

Interactive

The searches in online databases are usually conducted in a two-way communication between the searcher and the system in which both the server and user communicate with each other.

Usability

The well defined organization of information contents and search capabilities of online databases allow users to search and retrieve results more efficiently and effectively.

Expert System

The online databases are characterized as expert systems that provide information on specialized areas of knowledge.

Up-to-date

All the online databases comprise current information on its concerned areas. The online database providers or publishers regularly update the contents by adding new information to provide current and copyrighted scholarly materials.

Permanence

The published documents such as journals, reviews and books etc. are not subjected to unnecessary change over the period of time. All the essential knowledge information persists as such for a long time in the form of archives which can be retrieved at any time.

Time-sharing

On-line time-sharing implies the sharing of machine processing time among the users in many terminals simultaneously.

Real-time

The real-time in online database operations implies that the remote terminals respond quickly to the user's search processes. The remote terminals receive data, search the information, and return the results to be utilized by the users in ongoing activities.

Own Vocabulary

Inorder to support searching online databases have evolved their own controlled vocabulary. A controlled vocabulary is largely used to provide and retrieve information.

The Genesis of Online Electronic Databases

The online databases are present in many different forms providing contents of different aspects either

41

multidisciplinary or in specific subjects. The major function of online database is the authentic information retrieval by the information seekers. Information retrieval involves the organization, processing and providing access to the updated information in different forms and formats. Information retrieval systems have been developed to retrieve data from the vast collection of information in response to the user interest. These systems are the result of research and development carried out in previous decades and with the evolution of time and techniques many information retrieval systems have evolved. The need for the management of the mass flow of information in the field of scientific developments as well as business aftermath globalization gave much required impetus for the development of automated information retrieval systems. As a result the concept of automated retrieval system has developed to perform automated searches for the collection of knowledge information to sharpen the skills and fulfill the need base requirements. The revolutionary developments in ICT such as the emergence of internet, world wide web and improved communication technologies together brought major changes in the development of databases. The introduction of online information retrieval systems is one of the major outcomes of application of ICT in information retrieval. It is pertinent to mention that users generally search information from online databases, online public access catalogs, web search engines and digital libraries. The online information retrieval systems are also known as professional online systems which are also known as online databases. Therefore, an online database is recognized as a typical online

42

information retrieval system. The database can be accessed through some intermediaries by means of online networks.The earlier online databases primarily dealt with the retrieval of bibliographic information and afterwards began to include numeric information and then full-text information was incorporated to increase their scope and making them truly practical and exhaustive. At present, the online databases are providing access to diverse information including abstracts, citations, full texts, statistical data, journals, magazines, dictionaries, government documents, financial bulletins, audio and video contents and so on.

Common Online Electronic Databases

In general the online databases are either reference databases or source databases. A reference database directs the seekers to the source of information whereas a source database itself includes the actual information. In addition, the online databases are of many types on the basis of nature of content and scope of the information provided. Some common types of databases are discussed as under:

Article Database

Article databases provide full text articles published in journals, books and magazines. An article database allows a person to search across thousands of journals and magazines to locate an article on any specific subject. Some online databases only present citations instead of full text article or abstract that helps to locate the original article. Google Scholar is a common online article database.

Full-text Databases

The full-text online database comprises full text information of the publications that are basically either print or online in origin. The contents are provided for online viewing, printing or downloading. The text documents are supplemented with graphs, maps, pictures, illustrations and diagrams. Academic Search Premier is a multidisciplinary full text journal coverage database.

Reference Databases

The reference database provides abstracts, references or citations to the published text documents. It often includes terms which are descriptive of content on which retrieval of information is based. Some reference databases also provide abstracts to give brief description of original documents and the retrieval of information is usually based on the words given in abstract. They are differentiated into bibliographic databases and referral databases.

Bibliographic Databases

The bibliographic databases are widely used as reference tools to provide references, citations, abstracts and also index to the published literature. They are the excellent medium of access and quick delivery of published information to the users. The bibliographic databases provide information regarding journals, books and other publications. Indian Citation Index, Scopus and Web of Science are the common bibliographic databases.

Referral Databases

The referral databases direct users towards the actual source of information. It offers references to information such

as names, address and specialization of persons, institutions, information systems etc. Electronic Yellow Pages is a referral database.

Publisher Databases

Publisher databases are produced by online commercial service providers that sell their data to the clients and deliver information through the communication networks. These databases are commercial electronic information services that people access through web or internet. Anyone can download or copy the information from the internet anywhere in the world through database's home page. To access such types of databases searchers need to have an authorization number and password provided by the publishers. Oxford University Press is a common online publisher database.

Citation Databases

A citation database is an index of citations of the published research work. It enables the user to locate references, bibliographic citations for journal articles and to track articles in a specific subject. It also allows users to track which current documents cite which previous documents. Many citation databases include index of the journal articles along with its abstracts. By searching with keywords that might appear in an article users can retrieve citations of an article.

Theses & Dissertation Databases

These databases are repository of doctoral theses or dissertations awarded by universities and other institutions. These databases are intended to give maximum exposure and

accessibility of research work. As such they enable search for theses and dissertations through a single access point harboring millions of research work in full-text form. EThOS, Electronic Theses Online Service is a Theses and Dissertation Database.

Online Catalogue Databases

An online catalogue database is a bibliographic database that describes the books, periodicals and other electronic resources that are usually available in a library. Online catalogues are those online databases that enable searcher to search for documents by author name, title, subject headings, keywords, call number or government document number available in a particular library. IndCAT, WorldCat are online Cataloguing databases.

Indexing & Abstracting Databases

These databases provide brief summary of publications along with descriptors as access points to documents. Such databases provide clues to the relevance and location of the publication.

Multimedia Databases

These databases provide access to multimedia contents in the form of animations, pictures, videos and audio recordings etc. The multimedia contents are provided in the form of different media files like .txt for documents, .jpg used for images, .swf for videos, .mp3 for audio files. Academic Video Online is a type of multimedia database.

Institutional Databases

These types of online databases are developed by the professional associations or institutions to increase the

46

knowledge of their concerned areas among the people. These associations mainly work for promoting research and development in their working areas in the broadest manner. They develop different types of information sources to increase dissemination of knowledge related to their concerned areas including books, journals, reports and databases. The online databases put forward by institutions are mainly subject specific in nature.

General Interest Database

The general interest databases contain information of general nature like current news, political affairs, health, cultural, social, educational and other public issues. Encyclopedia Britannica is a commonly used general interest database.

Subject Specific Database

These databases are related for detailed study and research on a particular topic. These databases provide information from professional publications and also scholarly journals. The search in subject specific databases is more comprehensive in nature so as to provide access to more scholarly articles. MEDLINE is a type of subject specific database.

Directory Databases

A directory database provides information of published directories. These are not full-text databases although they may represent the complete text of a publication in a machine-readable form and these are not of numeric nature. Encyclopedia of Associations is a directory database.

Numeric Databases

It is a computer-readable collection of data that are numeric in nature. These are used in business and financial sector. These databases provide access in the form of statistics, demographic and financial reports, and stock market quotations.

The Digital Revolution

All the various types of online databases described have their own domains of functioning and providing information to the users throughout the world by the use of computers and networking. Some of the well known online databases in the field of education and research are JSTOR, Lexus-Nexus, Medline, ProQuest, ScienceDirect, Compendex, ERIC, Cambridge University Press, Clinical Evidence, Project Euclid, Business Source Premier, SIAM, Access Medicine, Cochrane Library, WorldCat, ERIC and many others. These are the excellent sources of information for those who are looking for authentic and credible sources of information. It is pertinent to mention that the emergence of the world wide web and its rapid development thereafter has allowed developers to provide universal access to digital information resources. Earlier the access to digital collections was supported by proprietary networks or by local or campus wide networks. These services also depended on a variety of end user software and hardware. With the emergence of web, place is no longer a barrier to access to digital libraries. Any examination of digital libraries must recognize the achievements of National Digital Library Programme of the Library of the Congress and its predecessor, the American

48

Memory Project. The key features of the National Digital Library Programme are the attention given to selection, the quality of presentation of the digital surrogates, the use of quality cataloguing data, the standards and facilities which have been developed to support discovery and access, and the depth of the technical documentation made available on the project site. The National Digital Library Programme one of the first examples of a publically accessible web-based digital library service. Some of the key digital library possibilities and challenges are being explored by the Digital Libraries Initiative, which comprises six research projects funded by National Science Foundation, in partnership with the US defence and space communities. These projects intended digital collections in a range of disciplines besides various indexing and searching techniques; explore interoperability standards and authentication issues. Alongside these pilot projects, research is also proceeding to develop conceptual models of the digital library and clarify the technical frameworks. The framework takes account of the fact that content in a digital library takes a wide variety of forms. The digital object is conceptually contained within an envelope which informs the access software how to unpack it, what standards it conforms and so on. The recent trend and change in the collection, storing, processing and dissemination of information have resulted in the evolution of digital library. Now most of the reference books like encyclopedias, dictionaries, directories hand books are published in electronic form. Moreover, about fifty percent of secondary resources like abstracting and indexing services are available in electronic

form. At present, most of the digital libraries are providing access to diverse digital information. In this changing scenario, reference works of modern libraries are influenced by a set of related technical and economic factors especially the increasing use of technology and techniques. The digital library primarily focuses on the access and retrieval of the digital information. The primary roles library professional play in digital library include organization of macro and micro documents (cataloguing and indexing), selection and acquisition of information, provision of information services, increasing access to information serving and users needs and organization to the unstructured electronically available information. Phrases like 'virtual library', 'electronic library' and 'library without walls', and now the 'digital library' all have been used interchangeably to describe this broad concept.

References

1. *Bonlis. Peter, Hellerstein. Joseph M, Stonebraker. Michael, (2005). 'Readings in Database System' (5th Ed.). Morgan Kaufmann Publishers.*

2. *Jukic. Nenod, Nestorov. Susan Vobosky Svetlozar. (2016) 'Database Systems: Introduction to Dtabases and data Warehouses'. Prospect Press.*

3. *Foster. Elvis C, Godbole. Shripad. (2016) 'Datbase Systems: Pragmatic Approach'. Apress Publishers.*

4. *Ricardo. Catherine M, Urban. Susan D (2015). 'Databases Illuminated', Jones Bartllet Learning.*

5. *Moyo. L. M (2004). 'The virtual patron. Science & Technology Libraries'. [Online]*

6. *Edmeades C. (2005). 'Why online database?' [Online]*

7. *Date. C.J (2003). 'An Introduction To Online Database Systems', (8th Ed.). Pearson Education.*

50

Significance of Library in Digital Era

राघवेन्द्र सिंह दांगी
लाइब्रेरियन
अंबाह पीजी कॉलेज,
अंबाह मुरैना म.प्र., भारत
एवं
थानसिंह दांगी
लाइब्रेरियन
गवर्नमेंट मेडिकल कॉलेज
रतलाम म.प्र., भारत

" न हि जानेत सदृश पवित्र मिट बिधते "।

श्री मदभगवत गीता ‒ 4 / 38

अर्थात इस संसार में श्रम से पवित्र और कुछ भी नही है ज्ञान की तुलना सदैव प्रकाश से की जाती रही है।

प्रस्तावना

ई–संसाधनों से तात्पर्य से उन संसाधनों से है जिनके द्वारा किसी भी विषयवस्तु की जानकारी क्षणों में प्राप्त की जा सकती है, जिसके अन्तर्गत ई–डेटाबेस, ई-जर्नल, ई–पुस्तकें, ई–थीसिस एवं ई–पत्रिकाएँ सम्मिलित हैं। यह उपयोगकर्त्ताओं के समाज को डिजिटल सूचना एवं ज्ञान के विशाल तथा व्यवस्थित संग्रहालय तक सुस्पष्ट अधिगम प्रदान करने वाली पद्धति है।

51

भारत में डिजीटल पुस्तकालयों का विकास

विकसित देशों में डिजीटल पुस्तकालयों का उपयोग बहुत पहले ही स्वीकार कर लिया गया था। मगर भारत में डिजीटल पुस्तकालय का विकास अभी डेढ दशक पहले 1990 की अवधि में सम्भव हुआ है। भारत में सर्व प्रथम डिजीटल पुस्तकालयों का विकास (नई दिल्ली) द्वारा 18–20 जनवरी 1996 को बंगलौर में आयोजित 15 वें राष्ट्रीय सम्मेलन में डिजीटल पुस्तकालय के विभिन्न पहलुओं पर 31 आलेख–पत्र प्रस्तुत किए थे। भारत में सवसे पहला डिजीटल पुस्तकालय वैगलौर मे स्थित भारतीय विज्ञान संस्थान आई. आई. एस. ने प्रारम्भ किया। जिसमे प्रतिवर्ष लगभग 1000 शोध–पत्र तैयार किये जाते है तथा अनेक सामयिकी पत्रिकाऍ (जनरल्स) डिजीटल रुप में उपलब्ध हैं।

इसके साथ भारतीय प्रैटोलियम उघोग में भू–वैज्ञानिक डेटाओं एवं सूचना स्त्रोतों के इलैक्ट्रोनिक सम्प्रेषण के उपयोग करने के प्रयास काफी पहले से चल रहे हैं। इस उद्योग की पुस्तकालय एवं सूचना इकाइयाॅ विशेषकर तेल एवं प्राकृतिक गैस आयोग ने अपने सभी प्रलेखों एवं पुनःप्राप्ति सेवाओं के आॅपेक आॅपेक वाग्डमयात्क डेटावेसों को विकसित किया है। आलेखों एवं अन्य प्रकाशनो के पूर्ण मूल पाठ ट्रेस्ट विम्ब नक्शे चित्रीय निरुपण आदि को भारत में अन्य संस्थान जिन्होंने डिलीटल पुस्तकालयों की स्थापना हेतु अपने प्रयास कर दिये हैं। उनमें नई दिल्ली स्थित राष्ट्रीय सुचना केन्द्र एन. आई सी. अखिल भारतीय आयुर्विज्ञान संस्थान ए. आई. एम. एस. बैगलौर स्थित राष्ट्रीय मानसिक स्वास्थ एवं मस्तिष्क विज्ञान संस्थान तथा एम.जी.रामचन्द्रन विश्वविद्यालय आदि।

पारम्परिक पुस्तकालय और डिजीटल पुस्तकालय में अन्तर :– पारम्परिक पुस्तकालय की अपेक्षा डिजीटल पुस्तकालयों के अनेक लाभ हैं। इसमें सामग्री डिजीटल रुप में होने के कारण आसानी से सुधारा एवं परिवर्तित की जा साकती है। तथा सामग्री को कम श्राम एवं थोडे समय में

ही कई विधियों से खोजा जा सकता है। व्यवस्थापन की कोई समस्या नहीं होती है। सामग्रियों के चोरी होने का भी कोई डर नहीं होता है।

ई–संसाधन कि विशेताएँ

Multiple Access

पुस्तकालय में ई संसाधनों से उपयोगकर्ता एक ही समय पर एक ही सूचना को दो या दो से अधिक उपयोग कर्ता सूचना प्राप्त कर सकते हैं।

Information retrieval

पुस्तकालय में ई संसाधनो से उपयोग कर्ता एक ही प्रकार की सूचना को बार बार प्राप्त कर सकता है और समय समय पर सूचना मे परिर्वतन भी कर सकता है।

Added value.

पुस्तकालय में ई संसाधनों से उपयोगकर्ता महगी से महगी सूचना को ई–डेटाबेस, ई–जर्नल, ई–पुस्तकें, ई–थीसिस एवं ई–पत्रिकाएँ कम से कम मूल्य में प्राप्त कर सकता है।

Easily Accessible

पुस्तकालय में ई संसाधनों से उपयोगकर्ता सूचना खोजने आसानी होती है और प्राप्त सूचना को एक स्थान से दूसरे स्थान पर आसानी भेज सकता है।

Save the Time

पुस्तकालय में ई संसाधनों से उपयोग कर्ता कम से कम समय पर अपनी अवाश्यक सुचना प्राप्त कर सकता है।

एक साथ एक ही ग्रंथ को कई उपभोक्ता एक साथ उपयोग कर सकते हैं इसके साथ ही सूचना की अनेक प्रतियॉ आसानी से कम से कम समय एवं कम से कम मूल्य में प्राप्त की जा सकती है। अत : पुस्तकालय में डिजीटल पुस्तकालयों की आवश्यक्ता निम्न कारणो से महसूस की गई।

1.   कार्य में सरलता

2.   कार्य में परीशुध्दता

3.   त्वरित सेवा

4.   उत्तम सेवा

5.   श्रम धन एवं समय की बचत।

उक्त सभी उदाहरणो से स्पष्ट है कि पुस्तकालयों को डिजीटल आई. सी. टी. पुस्तकालयों में परिवर्तित करना वर्तमान समय की ठोस आवश्यकता है।

ई–संसाधनों की आवश्यकता

वर्तमान युग सूचना का युग हैं। प्रत्येक व्यक्ति विश्वसनीय और सही जानकारी पुस्तकालयों और सूचना केन्द्रों से मिलने की उम्मीद रखता हैं। भारत में पुस्तकालय नई जानकारी के लिए इन चुनौतियों को स्वीकार करने के लिए स्वयं को तैयार कर रहें हैं। बहुत से पुस्तकालय डिजिटल और नेटवर्क की जानकारी काफी समय से उपयोग में ला रहे हैं। आज पुस्तकालय परिवर्तन के दौर से गुजर रहे हैं चुनौतियों, सिकुड़ते बजट, स्थान की कमी और प्रकाशनों की लागत और दूसरी तरफ सूचना के क्षेत्र मे गति से उत्पन्न जानकारियों में उल्लेखनीय वृद्धि हो रही हैं। इस कारण पिछले कुछ दशकों ने पूरे परिदृश्य को बदल दिया है।

आज सीडी रोम, मल्टीमीडिया, इलेक्ट्रॉनिक प्रकाशन, ऑनलाइन पत्रिकाएँ अधिक गति से लोकप्रिय हो रहे हैं। नए–नए प्रकाशन उभर कर सामने आ रहे हैं। इस क्रांति को जन्म दिया कम्प्यूटर विज्ञान और प्रकाशकीय तंत्र ने जो विश्व के राष्ट्रों को अधिक समीप लाने में महत्त्वपूर्ण भूमिका निभा रहें हैं। पुस्तकालयों में नेटवर्किंग की जरूरत हैं क्योंकि एक राष्ट्र की प्रौद्योगिकी मानव और भौतिक संसाधनों पर निर्भर करती हैं। ई–संसाधनों को आसानी से गूगल जैसे खोज इंजन के माध्यम से उपलब्ध कर सकते हैं। ई–संसाधन पुस्तकालय उपयोगकर्ताओं के लिए स्वतंत्र हैं।

आप इंटरनेट का उपयोग करके किसी भी कम्प्यूटर से उन तक पहुँच सकते हैं। आप को पुस्तकालय के खुलने का इंतजार नहीं करना पड़ेगा।

अन्तर्राष्ट्रीय स्तर पर ई –संसाधनों की भूमिका

विदेशों में ई–संसाधनों का विकास 1980 के दशक में शुरू हो गया था। ई–संसाधन, ऑनलाईन पत्रिकाएँ, अनुक्रमण और सार संक्षेप सेवाओं, संदर्भ स्रोतों और पूर्णपाठ पुस्तकों तक ही सीमित नहीं रहे, बल्कि पुस्तकालय संग्रह हमारे संग्रह विकास नीतियों में महत्त्वपूर्ण जरूरत बन गए हैं। अफ्रीकन पुस्तकालयों में विज्ञान पुस्तकालय, क्रेडरिक एवं प्रबंधन पुस्तकालय, शैक्षिणक पुस्तकालय, संगीत पुस्तकालय और इंजीनियरिंग पुस्तकालयों ने ई–संसाधनों को विकास नीति में शामिल किया है। ई–संसाधनों का बहुमत अंग्रेजी में हैं। वे विशेष रूप से अनुसंधान के लिए उपयोगी हैं, किन्तु अब अन्य भाषाओं में भी आवश्यक ई–संसाधनों को उपलब्ध करवाया जा रहा है। ई–संसाधन अन्तर्राष्ट्रीय स्तर पर प्रकाशित हो रहे हैं।

भारत की उच्च शिक्षा में ई –संसाधनों की भूमिका

संरक्षण और ज्ञान का संचार भारत में तेजी से हो रहा है। आजादी के समय महाविद्यालयों की संख्या 500 थी जो वर्ष 2012– 2013 में लगभग 35000 के पार पहुँच गई हैं। सन् 2010 के बाद इंटरनेट और इलेक्ट्रॉनिक प्रकाशन ने भारतीय शिक्षा का स्वरूप बदल दिया है। ई–संसाधन सभी विश्वविद्यालयी पुस्तकालयों में उपयोगकर्ताओं के लिए महत्त्वपूर्ण सिद्ध हो रहे है।

शोध के उद्देश्य

मध्यप्रदेश के विभिन्न विश्वविद्यालयों के पुस्तकालय में उपलब्ध शैक्षिणक ई–संसाधनों की सूची तैयार करना। मध्यप्रदेश के विभिन्न विश्वविद्यालयों के पुस्तकालय में उपलब्ध शैक्षिणक ई–संसाधनों का

विद्यार्थियों, शोधार्थियों एवं शिक्षकों द्वारा उपयोग किए जाने की स्थिति का अध्ययन करना। मध्यप्रदेश के विभिन्न विश्वविद्यालयों के पुस्तकालय में उपलब्ध शैक्षिणिक ई–ससांधनों तक पहुंचने और उपयोग करते समय विद्यार्थियों, शोधार्थियों एवं शिक्षकों के सामने आने वाली समस्याओं का अध्ययन करना। मध्यप्रदेश के विभिन्न विश्वविद्यालयों के पुस्तकालयाध्यक्षों से शैक्षिणिक ई–संसाधनों की जानकारी प्राप्त करना।

शोधार्थी

शोधार्थियों की पुस्तकालय जाने की बारम्बारता जानने पर यह पाया कि 33.33 प्रतिशत शोधार्थी सप्ताह में दो बार पुस्तकालय का उपयोग अधिक करते हैं। इंटरनेट की सुविधा होने की जानकारी भी उनमें अधिक पाई गई एवं वे पुस्तकालय में अधिक समय व्यतीत करते हैं। वे पुस्तकालय के ई–संसाधनों की सबसे अधिक जानकारी रखते हैं एवं उनका उपयोग सबसे अधिक करते हैं। वे सबसे अधिक ई–थीसिस का उपयोग करते हैं तथा इन्हें प्रथम वरीयता प्रदान करते है। वे पुस्तकालय में उपलब्ध ई–संसाधनों की वृद्धि ई–मेल के द्वारा चाहते हैं। वे ई–संसाधनों के सुधार के पक्षधर है। शोधार्थियों का पुस्तकालय अधिक जाना इनके अध्ययन सम्बन्धित आवश्यकताओं की पूर्ति को दर्शाता है। इंटरनेट की सबसे अधिक जानकारी रखने के कारण उनका शोध कार्य में इनका उपयोग करना है, क्योंकि इसके द्वारा कम समय में अधिक सामग्री उपलब्ध हो जाती है। पुस्तकालय में अधिक समय व्यतीत करना दर्शाता है कि वे विभिन्न पहलुओं का गहराई से अध्ययन करते हैं।

विद्यार्थी के विश्लेषण से निष्कर्ष प्राप्त हुए कि पुस्तकालय जाने की बारम्बारता जानने पर यह ज्ञात हुआ कि पाठकों के तीनों समूहों में प्रतिदिन 57.48 प्रतिशत विद्याथी ॔ पुस्तकालय का उपयोग करते हैं। पुस्तकालय की वेबसाइट होने की जानकारी विद्यार्थी अध्याय पंचम 236 सबसे अधिक रखते हैं। वे पुस्तकालय में बैठकर सबसे अधिक ई–संसाधनों

का उपयोग करते हैं। इनका उपयोग वे पुस्तकालय कर्मचारियों एवं मित्रों के कहने पर करते हैं। ई–संसाधनों में वे सबसे अधिक ई–पुस्तकों का उपयोग करते हैं। वे ई–संसाधनों को बेहतर समझते हैं तथा उन्होंने ई–पुस्तकों को प्रथम वरीयता प्रदान की हैं। वे पुस्तकालय में ई–संसाधनों की वृद्धि के पक्ष में हैं। वे व्यक्तिगत रूप से इनकी वृद्धि चाहते हैं। वे मुद्रित–संसाधनों की तुलना में ई–संसाधनों को बेहतर समझते हैं। ई–संसाधनों में उन्होंने सबसे अधिक सुधार की आवश्यकता बताई। तीनों समूहों में विद्यार्थियों का पुस्तकालय अधिक जाने का कारण अपने अध्ययन संबंधित जानकारी की पूर्ति है। वे पुस्तकालय का उपयोग अधिक करते हैं। उनका पुस्तकालय में अधिकांश समय व्यतीत करने का कारण चाही गई, विषयवस्तु सरलता से मिल जाना हैं। वे पुस्तकालय कर्मचारियों एवं मित्रों के सम्पर्क में अधिक आते हैं इनसे उन्होंने ई–संसाधनों का उपयोग करना सीखा।

शिक्षक

शिक्षकों की पुस्तकालय जाने की बारम्बरता जानने पर यह पाया कि 12.38 प्रतिशत शिक्षक पुस्तकालय का उपयोग प्रतिदिन सबसे अधिक करते हैं। शिक्षकों में ई–संसाधनों के प्रति सबसे अधिक जागरूकता पाई गई। वे सबसे अधिक लम्बे समय से इनका का उपयोग कर रहे हैं तथा सबसे अधिक इनकी गुणवत्ता मानते हैं। ये ई–संसाधनों को अधिक डाउनलोड करते हैं तथा अधिक समय ई–जर्नल के अध्ययन में व्यतीत करते हैं। पुस्तकालय द्वारा प्रदान किए गए ई–संसाधनों से ये अधिक संतुष्ट पाये गये। वे प्रदर्शनी द्वारा ई–संसाधनों की वृद्धि के पक्ष में हैं, तथा वे इनमें सुधार चाहते हैं। शिक्षकों का पुस्तकालय प्रतिदिन जाना यह दर्शाता है कि वे ई–संसाधनों के प्रति अधिक जागरूक हैं। शिक्षकों को ई–संसाधनों के प्रति अधिक जागरूकता का कारण उनका अपने अध्ययन कार्यों में नवीनतम् कार्यों की जानकारी प्राप्त करना है । इनका

ई–संसाधनों का लम्बे समय से उपयोग करने का कारण इनके प्रति संचेतना है तथा इनके द्वारा ई–डेटाबेस का अधिक उपयोग का कारण कार्यों का शीघ्रता से पूर्ण होना हैं। शिक्षकों का ई–संसाधनों की गुणवत्ता को महत्त्व देना इनकी संचेतना का परिचायक हैं। इनका ई–संसाधनों को सबसे अधिक डाउनलोड करना यह स्पष्ट करता है कि वे विद्यार्थियों को विषय वस्तु उपलब्ध करवाना चाहते हैं। इनका शोधकार्य के लिए संसाधनों का अधिक उपयोग करने से यह दृष्टिगत होता है कि वे अपने क्षेत्र की विषयवस्तु की नवीनतम् जानकारी गहराई से प्राप्त करना चाहते है तथा ई–जर्नल का अधिक उपयोग विभिन्न क्षेत्रों में हुए शोधकार्यों से अवगत होने का कारण है। इनकी ई–संसाधनों की संतुष्टि से यह दृष्टिगोचर होता है कि पुस्तकालय में चाही गई विषयवस्तु उपलब्ध हो जाती हैं। इनका पुस्तकालय के ई–संसाधनों में वृद्धि चाहना इनके महत्त्व से परिचित होना दर्शाता है। उनका मानना है कि प्रदर्शनी के माध्यम से विषयवस्तु की सरलता से गहन जानकारी मिल जाती है। उनका ई–संसाधनों में सुधार पुस्तकालय का उन्नयन चाहना दर्शाता है।

परिकल्पनाओं के निष्कर्ष

साक्षात्कार के निष्कर्ष यह दर्शाते हैं, कि पाठकों के तीनों ही समूह पुस्तकालय में समय व्यतीत करते हैं, वे पुस्तकालय में उपलब्ध ई–संसाधनों की जानकारी रखते हैं उनका इनकी जानकारी रखना इनकी जागरूकता को दर्शाता हैं। ई–संसाधनों में सबसे अधिक विद्यार्थी ई–पुस्तकें, शोधार्थी ई–थीसिस एवं शिक्षक ई–जर्नल का उपयोग करते हैं। तीनों ही समूह इनका उपयोग अपने अध्ययन कार्य में अक्सर ज्ञानवर्धन एवं नवीन शोध कार्यों के परिणामों से अवगत रहने के लिए करते हैं। ये सभी इनके लाभ एवं महत्त्व से परिचित है तथा इनके उपयोग से अपने अध्ययन की गुणवत्ता को बढ़ाना चाहते हैं।

इनके उपयोग करने में सभी पाठक सहजता का अनुभव करते हैं। पाठक ई–संसाधनों का उपयोग करते समय कुछ समस्याओं का अनुभव करते हैं। जैसे डाउनलोड एवं धीरे खुलने की समस्या इसके अतिरिक्त विद्यार्थियों एवं शोधार्थियों के समक्ष चित्रपट पर पढने कि समास्या भी देखने को मिली है।

सभी ई–संसाधनों में सुधार चाहते हैं। विद्यार्थी अधिक प्रशिक्षण, शोधार्थी डेटाबेस में वृद्धि एवं शिक्षक ई–पुस्तकों में वृद्धि चाहते हैं।

सन्दर्भ ग्रन्थ सूची

1. इण्डियन यूनिर्वसिटी एजुकेशन कमिशन (1948–49). नई दिल्ली, गवर्नमेंट ऑफ इंडिया, पृ.स. 34–45 ।

1. नतरंजन, एम. (2004). इलेक्ट्रॉनिक्स बुक मैनेजमेंट एण्ड यूज. लुधियाना : के.सीपब्लिकेशन, पृ. सं. 125–126 ।

2. शर्मा,चेतन (2009). ई संसाधनों का प्रभाव। इलेक्ट्रॉनिक जर्नल ऑफ एकेडमिक एण्ड स्पेशल लाइब्रेरियनशिप : स्प्रींग जर्नल वॉल्यूम 10, नं0 1 ।

3. https://shodhganga.inflibnet.ac.in/simplesearch?query=Digital%5C+Library%5C+&sort_by.

4. कुक, सर. अल्बर्ट. (2008). युगांडा के शैक्षिक एवम् अनुसंधान में इलेक्ट्रॉनिक सूचना संसाधनों के उपयोग के बारे में जानकारी का असरः इलेक्ट्रॉनिक लाइब्रेरी जर्नल वॉल्यूम 25 (3)।

5. गोडा, बासपा. (2009). कर्नाटक विश्वविद्यालय के पुस्तकालयों में अनुसंधान शोधार्थियों द्वारा ई–संसाधनों के उपयोग कर एक सर्वेक्षणः जर्नल इनलाईज ऑफ लाइब्रेरी एण्ड इंफोर्मेशन स्टीडिज वॉल्यूम 56 (3)।

6. वारवारा, एलस (2007). कला इतिहासकारों द्वारा ई–संसाधनों का उपयोग कलेक्शन बिल्डिंग जर्नल वॉल्यूम 26,(1), 2007 ।

Development and Use of Web based Library Information Resources and Services with Specific Reference to Digital Age

Anil
Librarian
Dept of Library and
Information Science
Dyal Singh College
Karnal, Haryana, India

Abstract

Information technology has its impact on almost all the disciplines, especially computer & telecommunication technology have highly revolutionizes in the field of library & information science. Today we are living in the age of information. The information is a dynamic and unending resource that affects all disciplines and all works of life. Information is available in various formats, such as print media and web media etc. It has been experienced that web based information resources and services have great role to play in academic activities. Keeping this fact in view, all Universities, educational institutions, professional associations and societies in developed countries are largely depending upon the web based information resources. Internet users have come to rely on the vast amount of research and information content available, and often consult the web before making dramatic life changing decisions.

Change is constant. The birth of Information and Communication Technology (ICT) has drastically affected library services and resources. It has transformed the quest for knowledge in different dimensions, not necessarily through the conventional formats. This culminates into intranet and internet. Electronic resources are information on devices such as net, hard disc, flash drive and CD ROMS. It could be in form of database application created for a particular organization that manages data and allows easy access, fast storage and retrieval of that data. This concept deals with the impact of internet based services and sources its reward over libraries.

Introduction

The emerging information and communication technology have offered potential solutions to the problem created by the ever growing literature publication. Information technology has its impact on all disciplines and area of operations including libraries and information centres. The future generation is going to witness, what is called "Digital libraries" instead of conventional libraries. There are many activities associated with information processing and retrieval, like production, location modification and manipulation all such activities. Computer is the best tools for performing all such activities. Computer is the best available tool for library & information science professional for quicker processing, storing and dissemination of information. Library collections are growing multifold and electronic information resources are becoming vague. Almost entire gamut of primary, secondary and tertiary information resources hitherto embodied in print format are now available in the form of electronic databases. The Internet and its World Wide Web (WWW) have provided a platform to access information from remote databases. As a result, information resources and services available on web are increasing. Libraries and librarians have come a long way since the days of chained books and closed stacks. We are in an era of

61

scientific development at its peak and consequent information explosion. Their number is also increasing in recent years and many of them are available on internet and on CD.

Internet

Internet has made information any bit of knowledge recorded at any time, kept at any time, kept at any part of the world. If it is available in digital media just a click away, and lakhs of libraries are now on the side of information super highway and millions of people are joining the rush in the superhighway seeking information from the net.

The internet has revolutionised our society, our economy and our technology system. Over the past century, important that is drawing people of the world closer and closer together. About fifteen years ago, most of the world knew little or nothing about the internet. The internet was then a private network accessible only to computer scientists and researcher who used it to interact with colleagues in their respective disciplines. It is estimated that about 60 million host computers on the internet today serve about 200 million users an over 200 countries and territories.

What is Web Based Library Service?

A digital Library provides and develops electronic services, the library websites and library staff. Electronic Information services such as use of electronic information services, Use of electronic services, use of internet, use of CD-ROMs databases ,use of e-journals, and use of search engines and search strategy. The information searching habits of internet users is multifaceted and the literature available is extremely broad ranging.

Advantages of Web Based Services

1.   Availability of information in different places and also in different formats

62

2. Availability of less number of library staff to carry out the library works and services
3. Cut in library budget.
4. Information for decision making in MIS
5. Instant and elaborate information requirements for R &D activities
6. Less dependence upon the library staff for getting the required information
7. Location of laboratories/ departments in different places in the campus•
8. Multifold increase of the cost of books and journals
9. To save the precious time of the scientist.

Campus-Wide-Network

Information services that can be provided in the Campus-Wide-networked computer environment:

1. OPAC
2. User status
3. Reservation
4. Online circulation transaction
5. CAS
6. SDI
7. CD-ROM Network Services
8. E-Mail services
9. Bulletin Board Services
10. Indexing & Abstracting Services
11. Content page Services
12. Research Alert

Modified Web-Based Services

1. Indexing
2. OPAC to Web OPAC
3. CD-ROM to Web databases
4. Manual to digital reference services
5. Reference Services
6. Manual to Electronic
7. Document Delivery Services

Net-Web-Based Library Services

1. Virtual Library Tours

2.   Library Portals
3.   Library Web Sites
4.   Web-based user Education
5.   FAQ
6.   Library Calendar
7.   Web Forms
8.   Bulletin Board, Discussion Forum and List Serves

Library Portal

At Present, many library services are provided through the library web pages. Web services are being offered using various web software and tools by integrating the technologies to provide web based services to the users. Library automation has provided integrated solution for the in-house operations and web enabled services on the campus and intranet using modern web tools and techniques

Multimedia Presentation Service

1.   Audio Video Presentation

Internet-based Communication Services

Libraries use internet based communication system**.** Internet based communication Services allows us to access huge amount of information such as text, graphics, sound and software over the internet. Following diagram shows the four different categories of Internet Services. Network based communication system is used for communication between person-to-person, person-to-group and group-to-group.

Main Network-based communication services are below:

E-mail

Short for is electronic mail. E-mail is information stored on a computer that is exchanged between two users over telecommunication. It is the most popular widely used services of the internet. The first e-mail was sent by Ray Tomlinson in 1971. E-mail is the term given to an electronic message, usually a form of simple text message that a user at a computer system

64

Listserv

A Listserv is a method of communicating with a group of people via email. Listserv are electronic groups that typically centre on broad topics such as digital libraries or reference services etc

Chat or Instant Message

Instant messaging, often shortened to IM, is the exchange of near real time messages through a stand-alone application or embedded software. Instant messaging (IM) systems can be very useful. Chat refers to live discussions conducted using the internet, usually between two or more than two persons using their keyboard to communication It allows immediate and convenient communication between two parties. If you use an externally administered system, then you don't have to worry about managing the infrastructure.

Conference

Conference is generally understood as a meeting of several people to discuss a particular topic. At a conference, innovative ideas are thrown about and new information is exchanged among experts Conferencing can take many forms, such as web as web chat, audio conferencing, video conferencing etc.

Audio – Conferencing

Audio conferencing is where two or more people in different locations use technology like a conference bridge to hold an audio call.

Video Conferencing

Video conferencing is a technology that allows users in different locations to hold face-to-face meetings without having to move to a single location together.

Ask-A-Librarian

Ask-A-Librarian services are Internet-based question and answer service that connects users with individuals who possess

specialized subject knowledge and skill in conducting precision searches. Most "Ask-a-Librarians" services have a web-based question submission form or an e-mail address or both. Users are invited to submit their queries by using web forms or through e-mail. Once a query is read by a service, it is assigned to an individual expert for answering. An expert responds to the query with factual information and or a list of information resources. The response is either sent to the user's e-mail account or is posted on the web so that the user can access it after a certain period of time. Many services have informative web sites that include archives of questions and answers and a set of FAQs. Users are usually encouraged to browse archives and FAQs before submitting a question in case sufficient information already exists.

Net Meeting

Net Meeting provided desktop audio/video sharing, chat and file transfer functionalities. It uses provide multi-user applications and data sharing over intranets or the internet. NetMeeting was available for use starting with later versions of Internet..

Internet Relay Chat (IRC)

IRC is the most popular tool on the internet, used by people to talk to each other using computer. It is used by people sitting at their homes anywhere in the world to talk to each electronically using computer. It is generally called chatting. The chat takes place on channels. Channels are the virtual location on IRC networks where user meat to talk to one another. It is even possible to have conversation on several channels at the same time. Some channels will be topic specific, but other are less grid and will be having a general char.

Internet Telephony

Allows the internet users to talk across Internet to any PC equipped to receive the call. The most important benefit of IPT is easy implementation money and saving of innovative services. In the future

VoIP services may use a single infrastructure for providing both internet telephony and internet access.

E-commerce

E-commerce is a business methodology of conducting, managing and executing business transactions using computer and telecommunication network. Internet brought about a new concept called electronic commerce in the marketing & business. The internet probably continues to have an important role in electronic commerce including online ordering by the libraries. Books and journals can be ordered through web-based ordering system.

Internet –based Content publishing and delivery services

The World Wide Web known as WWW, W3. The web help people to publish, organise and access to information on the internet. The web service as a platform for several specialised content publishing and delivery services. Some of important tools for content publishing and delivery services applicable to libraries and information centres are described below

Blog

In 1994, when blogs began, a blog was more of a personal diary that people shared online. Entries are commonly displayed in reverse chronological order. Blogs are considering as lightweight publishing tool. Then, people saw an opportunity to communicate information in a new way online it is a platform where a writer or a group of writers share their views on an individual subject.

Wikis

Wiki is one of the most prevalent buzzwords on the Internet, right up there with cloud computing' and responsive design. This term "wiki" actually means *quick* in Hawaiian. wikis is a collection of web page deigned to enable anyone who access it to contribute or modify content, using a simplified mark-up language.

Vod Casting and Pod Casting

An idea of video podcast arises from the podcasting and is its logical expansion. Video podcast, vodcast, all the shorts of Video-On-Demand, represent a similar technology to podcasting, The "VOD" in Vodcasting stand for "Video-on-demand". The term podcast is derived from the media player, "iPod", developed by Apple, and the term "broadcast", the traditional means of receiving information and leisure content on the radio or television. Users can subscribe to such feeds and automatically download these files directly into an audio management program on their PC's.

RSS Feeds

With so much new content on the web added daily, it can be tough to keep up with what's happening online RSS acronym for Real Simple Syndication or Rich Site Summary. People try several different ways, including visiting specific websites every day including visiting specific websites every day. The technology on one hand allows a web site to list the newest published update.

Information Communication technology based library services

Today is information communication technology era. Everyday many literatures published in the market. The world has become a global village with information superhighways created through networks like Internet. This information processing, storing and dissemination with the assistance of computer is called the information technology. New ICT can potentially support a range of traditional and new library services. Most of the library services generated using information communication technology be like closely to those generated.

OPAC & WEPPAC

Remote access to the lib catalogue (OPAC) was possible only through a telnet connection before the web lists more than 12000, online courseware available on the web. Moreover, highly specialized web site are now coming-up in various disciplines which

offer information in totality including all kind of resources in electronic format EI Engineering village, ISI Electronic library are some of important example.

Virtual Library Tour

Several library website facilitate virtual guide to the physical facilities including collection, services and infrastructure available in the library through their web sites the combination of the following three web based interface are used to facilitate the virtual lib tours:

- (a) Library maps & floor plans
- (b) Library department/units /services
- (c) Photographic views

Library Website

Academic libraries in development countries started using web technology to create home pages as starting point or as gate way for searching information about the library.

Current Awareness Service

The following services are provided electronically apart from manual service:

1. Daily received of journal list and latest issues of journals are being putting on library home page on daily basis
2. Daily received to preprint
3. List of IUCAA preprints

Network based services and its users

1. E-mail
2. Webs access services to users
3. Content page service to remote users
4. Web services based on library homepage

Web Based Information Resources

E-Resources

E-resources or Electronic resources refer to those materials that require computer access whether though a personal computer, mainframe, or handled mobile device. They may either be accessed

remotely via the Internet or locally. Some of the most frequently counted types are e-books e-journals, Indexing and Abstracting database, Bibliographic databases, Reference database, Numeric and statistical database etc. E-resources are revolution in higher education sector. These resources are also known as Internet information resources. These resources may be categorized as below:

Websites

Portals

Online-Courses

E-Journals

E-Books

E-BOOKS

The e-book is the XXIst century reader's companion. It combines all the benefits of the multimedia, digital coding and the Internet. It enables user to carry everywhere books and can be read on all types of computers including handheld devices. E-books also contain audio, video and dynamic hyperlinks. E-books can be delivered immediately from anywhere in the world by downloads, e-mail file attachment, on diskette or CD-ROM.

E-journals

An electronic journal is a periodical publication which is published in electronic format, usually on the Internet. Search the contents pages and/or the full text of journals to find articles on a certain subject. It is important that the library has an informed perspective on how e-resources are used and valued by the user community regarding their awareness and use of these materials.

Advantages of internet based sources and services

1. Accessibility
2. No physical boundary
3. Multi access
4. Linkages

70

5. Currency
6. Cost effective
7. Time saving
8. Convenience
9. Storage and security
10. Searching and Browsings
11. Multimedia information
12. Speed

Conclusion

The use of new information & communication technologies is library & information system has undoubtedly increased the efficiency on the library services. These days massive growth of information and communication technology has appeared as most significant medium for storage and retrieval of information. Web based information services are essential for research scholars in universities. The transfer of library services to the web based environment helps the users to find, evaluate, and use information effectively. E–Resources are currently increasing as essential source of information for all current and emerging considerations and thoughts imminent into survival in the area of teaching, learning and research. The dramatic and swift changes in information management have given a new face-lift to most of the libraries. The users, who form the integral part of information system, have to be given due importance in achieving the pinnacle of success. The standards for organizing web-based resources are still in the early stages of development, and librarians are forced to utilize standards for print resources that were not designed for electronic resources. Additionally web-based information resources are volatile in the sense that may be moved from one site to another or may be removed altogether from web.

References

1. *Bhatnagar, A. (2011). Web-Based Library Services. (pp. 426-434). Ahmedabad.*

2. *Reddy A. Hanumanth, (2017). Web Based Information Services for Academic Environment: An Overview. International Journal of Library and Information Studies Vol.7 (4) Oct-Dec, 2017 pp 1-5.*

3. *Bhatnagar, A., & Deshmukh, V. (2006). Web Technologies for User Education. 4th International Convention CALIBER, (pp. 240-256). Ahmedabad.*

4. *Bhatnagar, Anjana., Web-Based Library Services. 3rd Convention PLANNER -2005, Assam Univ., Silchar, 10-11 Nov., 2005.*

5. *Jagadish, M.V., (2020). Awareness and Use of E-resources by College Students. International Journal of Library and Information Studies Vol.10(3) Jul-Sep, 2020. pp 1-7.*

6. *Dharmender and others, (2020). Use and Awareness of Electronic Resources by Post-Graduate Students in Technical University Haryana: A Study. International Journal of Library and Information Studies Vol.10(3) Jul-Sep, 2020. pp1-6.*

7. *Development and Use of Web based Information Resources with Specific Reference to E-Books : A Case for S&T Libraries. (2003). CALIBER, (pp. 1-14). ahemdabad.*

8. *Digital Libraries. (2006). new Delhi: Kanishka Publishers, Distributions.*

9. *Adams, J., & Bonk, S. (1995). Electronic Information Technologies and Resources use by university faculty and preference for related library services. College and Research Libraries, 119-131.*

10. *Andrews, J., & Law, D. (2004). Digital libraries Policy, Planing and Practice. Ashgate.*

11. *Arora, J. (2001). Web Based Digital Resources and Services : Trends and Innovation. CALIBER 2001, (pp. 185-212). Pune.*

12. *BANERGEE, S. (1999). Electronic Journals: new era. , 44(2). IASLIC Bulletin, 44(2), 62.*

13. *Cleary, J. (1994). Academic Libraries, Networking and Technolgy : Some Recent Report. Australian Library Journal, 235-56.*

14. *Danrita, J., Babu, V. R., & Marichary, T. (2009). Future Concepts of Library and information Services Changes, Challenges and Role of Library Professionals. New Delhi: Ess Ess Publications.*

15. *Kumbar, M., Rao, R., & Nargund, I. (2007). Electronic Information Resources: A Methodology Approach Towards Introducing Users. Caliber, (pp. 74-79).*

16. *Li, L. (2009). Emerging Technologies for Academic Libraries in the Digital Age. Chandos Publishing.*

17. *Michel, J. P. (2013). Web Based APIs and Libraries. Chicago: American Library Association.*

18. *Neena, Singh, (2001). Internet: Importance and Usage for Library and Information Professionals. DESIDOC Bulietin of Information Technology, Vol. 21, No. 3, May 2001, pp. 17-28*

19. *Ramana, P. V. (2013). Application of Information Technology in Libraries. New Delhi: Ess Ess Publication.*

20. *Singh, G. (2011). Digital Libraries and Digitization. New Delhi: Ess Ess Publication.*

21. *V., Bharathkumar.(2020). Virtual Reference Service through Mobile App Developed Using MIT App Inventor: An effective tool for Librarians in Covid-19 Pandemic Scenario. International Journal of Library and Information Studies Vol.10(3) Jul-Sep, 2020 pp.1-6*

22. *http://www.netlibrary.com/*

23. *http://www.ala.org/rusa/electron.html*

Uses, Features and Significance of Online Public Access Catalogue (OPAC) in Colleges and Universities

Pankaj Bhagat

Asst. Professor cum Library in Charge
MLIS, PGDM, DIC, Ph.D. (Pursu.)
DIPS IMT College, Jalandhar,
Punjab, India

Priynka Neogi

Librarian,
Uttarayan College of Education,
DIPS IMT College, Jalandhar,
Punjab, India

Abstract

This paper discloses about the application, features and uses of the OnlinePublic Access Catalogue (OPAC) in colleges and universities. Typically, libraries were customarily known to give admittance to library data materials through card lists. In 1970 with the development of PC innovation and Telnet, OPAC come in working. In the progression in data correspondence innovation, card index supplanted with OPAC the conventional strategies for data access have been killed as most libraries received the utilization of OPAC. The customary idea of admittance to library assets which is hard to comprehend for library clients. Then again with the assistance of OPAC clients search effectively various kinds of sources like Database, Digital Repository and various sorts of e assets which are overseen by the distributer or a library. OPAC is exceptionally solid

and viable instrument for brisk and simple admittance to the library assets. Library is principle part of the greater Learning establishment/college. No organization of higher learning can be fruitful without a library particularly as projects of study offered inside the college would not be licensed without an exceptional library for the arrangement of satisfactory data assets in those regions of control.

In giving a helpful climate to research and studies, the college library gives very much supplied flow research materials and prepared work force to arrange accessible data materials and help resources and understudies in the recovery and utilization of these assets. An Aina (2004) state that online community index (OPAC) is the most current type of library inventory, whereby bibliographic records of the relative multitude of archives assortment are put away in the PC memory or worker.

Keywords: - OPAC, Uses of OPAC, Features of OPAC, History of OPAC

Introduction

Definition

The online public access catalogue, often abbreviated OPAC, and frequently synonymous with library catalogue, is an online database of materials held by a library or group of libraries

The online public access catalogue (OPAC), regularly called as OPAC, and often inseparable from library list, is an online data set of materials held by a library or gathering of libraries. Online inventories advanced from simple card indexes, and comparably empower looking through the library's assortment of books and different materials. First presented in 1983, Dynix was one of the first and most famous business library mechanization frameworks at any point delivered, appreciating almost twenty years of predominance in libraries around the world. Albeit a small bunch of test frameworks existed as ahead of schedule as the 1960s, the primary huge scope

online lists were created at Ohio State University in 1975 and the Dallas Public Library in 1978.These and other early online list frameworks would in general intently mirror the card inventories that they were planned to replace.Using a devoted terminal or telnet customer, clients could look through a small bunch of pre-organize files and peruse the subsequent presentation similarly they had recently explored the card inventory.

Objective of the Study

1. To find out the features of the OPAC.
2. To investigate historical aspects of the OPAC.
3. To find out uses of the OPAC.
4. To ascertain previous study of the OPAC.

Uses of online public access catalogue (OPAC)

1. The purpose of the library catalogue is to locate items within the library's collection. The catalogue is used to find materials based on author, title, subject, or format. A high quality catalogue makes the library collection easier to use and more accessible.
2. The OPAC has the features of simple and advance search options.
3. The OPAC gives the facility to searching by Boolean operators " And, Or, Not"
4. The OPAC gives the facility to the library users to search the print resources like books, journals, CDs, Magazines, Thesis and dissertations.
5. The OPAC has significant and one of most important component of the libraries
6. The OPAC gives the facility to the library users to search the print resources like books, journals, CDs, Magazines, Thesis and dissertations by ISSN, ISBN, author, Publisher, Accession Number, Title and Keywords.

7. The electronic indexing programming is exceptionally intelligent, simple to-explore, and easy to-comprehend or easy to use in nature.

8. The library OPAC framework gives simple and distant admittance to countless library materials across overall libraries.

9. Supporters get the alternative to play out a top to bottom quest for required records.

10. The library material can be refreshed every now and then and rapidly.

11. The library benefactors' time gets saved as they don't have to move starting with one spot then onto the next to discover books.

12. The library the executive's framework can be gotten to whether or not the library is open or not.

13. To make the book search all the more quicker and helpful, MasterSoft has planned and built up a library the board application: M-OPAC that empowers supporters to look through books online by means of their versatile or cell phone. This portable based library application offers a cloud stage to empower overall libraries to share their data and information.

14. The electronic indexing programming is exceptionally intelligent, simple to-explore, and easy to-comprehend or easy to use in nature.

15. The library OPAC framework gives simple and distant admittance to countless library materials across overall libraries.

16. Supporters get the alternative to play out a top to bottom quest for required records.

17. The library material can be refreshed every now and then and rapidly.

18. The library benefactors' time gets saved as they don't have to move starting with one spot then onto the next to discover books.

19. The library the executive's framework can be gotten to whether or not the library is open or not.
20. To make the book search all the more quicker and helpful, MasterSoft has planned and built up a library the board application: M-OPAC that empowers supporters to look through books online by means of their versatile or cell phone. This portable based library application offers a cloud stage to empower overall libraries to share their data and information.

The accompanying focuses portray the critical highlights of OPAC framework

1. Searches can be separated in various manners for improving on the activity.
2. Clients have the arrangement to move any bibliographic record forward and in reverse way which emulates looking through a book physically by traveling through a library rack.
3. The library the board framework saves huge measures of exertion and time by empowering supporters to choose an inquiry in the given rundown and return to that recently looked through terms with a couple of snaps.
4. Benefactors can peruse and discover the records by entering - Heading, Control Number, Keyword Search, Title, Author, Subject, and so on in the product.
5. Benefactor gets the admittance to see their own record of online book giving/exchanges from the library inventory on the web.

Working of Online Public Access Catalogue (OPAC)

An online Public Access Catalogue, otherwise called OPAC, is an online data set of the relative multitude of assets and materials held by a specific library. It's a card inventory, of sorts, that is gotten to through PC or other electronic gadget. Online community lists might actually supplant the good old card index as methods for aiding library guests find the assets they look for. Clients can look through

the data set electronically, which can furnish them with speedier and more careful methods for finding essential data, assets, books, writing, or different materials. One of the special parts of an online community list is that it's easy to use and open by all gatherings. That implies that anyone, paying little mind to their age, status, or even their degree of information about PCs, can utilize the framework. On the off chance that help is required in a pursuit, the actual framework is intended to offer that help by utilization of different prompts, recommendations, help points, FAQs, and even blunder messages when required. List items are shown in an arrangement, that is not difficult to peruse and comprehend.

Review of Literature

Library exercises and capacities have gone through changes throughout the long term. The libraries today are more proactive in their exercises particularly with the presentation of online free inventory (OPAC) offices to college libraries, which has achieved a high level route in the procedures of getting to and recovering data assets that a library procured to serve its clients; it has likewise changed the methods of offering types of assistance offered to clients local area. (Gohain and Siakia, 2013). OPAC has reformed the conventional availability to assets of libraries by and large and scholarly libraries specifically. It is an interface of data recovery framework which helps data searchers to get to assets of libraries utilizing a few passageways (Fabunmi and Asubiojo, 2013). As per Animate (2018), OPAC is an online catalogue of a library assortment that is accessible to the public. The ALA Glossary of Library and Information Science (2000) characterized OPAC as a PC based and upheld library list (bibliographic data set) intended to be gotten to through terminals. VillenRueda, Senso and Moya-Anegon, (2007) has been a consistent domain of study for certain many years, this has prompted seeing how information extraction frameworks may be

79

improved, to more readily fulfil the instructive requirements of the clients.

As methods for meeting up with the difficulties of guaranteeing that data materials are accessible and available, libraries give inventories to show what is accessible in the library and where they can be gotten. Aina(2004) believed that OPAC is the most present day type of library list whereby bibliographic records of the relative multitude of reports in an assortment are put away in the PC memory plate; it is proficient and has all the preferences over different types of index. It is critical to once in a while survey the viability of the OPAC particularly from the clients' perspective. This is fundamental thinking about the uniqueness of every college library and the way that intermittent evaluation will give a sensible image of OPAC execution; in this manner, helping administrative choices on issues influencing the library inventory (Onuoha, Umahi and Bamidele, 2013). OPAC accordingly gave clients a methods for looking and getting to data, clients can see the assortments furthermore, issue status of each report of the library and can hold and recharge an archive of their interest when required (Swaminathan, 2017). To perceive whether these OPACs are offering glancing through limits and workplaces according to introduce days, quick moving, progressed age and IT-based society. The revelations uncover that but all these OPACs under scrutiny give crucial request decisions and workplaces, anyway an appraisal of the plan features shows deficiencies that continue suffering among them. Structure fashioners have now not manhandled the latest advancement commitments for better utilization of OPACs. Thusly, libraries need to revaluate the utilization of forefront web headways to make the OPACs gainfully utilitarian, usable and appealing for customers of the brisk changing advancement time frame to get to information on OPAC in a bleeding edge mechanical environment. Introduction OPAC is a crucial information recuperation gadget to help academic library customers to

80

discover the library resources profitably and effectively; it is a specific instrument for getting to and suitably utilizing printed variety of a library. It is a section point and a guided pathway to a library's fortunes. "An OPAC gives the customers the benefits of online permission to the library's record. It grants them to look and recuperate records depending upon the fundamental library the heads' structure, it in like manner offers a couple of workplaces like online reservation, borrower status checking.

Libraries need to give more thought with respect to their most huge reference instrument the OPAC. (Thanuskodi, 2012). The OPAC has extraordinarily impacted the actual idea of libraries and clients of data assets by opening them to a variety of entrances through which they can get to and recover data. Adeogun (2003) announced that the assembly of PCs what's more, media communications innovation has made conceivable the exercises which were thought of unimaginable previously. Online community inventory (OPAC) might be characterized as a data set of bibliographic records portraying the possessions of a library. Swaminathan , (2017) thought that "OPAC is a gadget of progress in the present libraries as it assists clients with looking for library assets and to discover the accessibility of such archives in the library at a given point as expected. Online catalogues initially turned into a thing during the 1960s, yet the principal outstanding and enormous scope lists weren't created until the 1970s (explicitly at Ohio State University in 1975 and Dallas Public Library in 1978).

History of Online Public Access Catalogue (OPAC)

During the 1980s, an ever increasing number of online inventories were created with the presentation of the main business frameworks. From that point onward, nonetheless, interest faded, and the prevalence of the online free inventory everything except vanished during the 1990s. Remember that this was all preceding boundless utilization of the Internet and any of the web crawlers we have

81

accessible to us today. New frameworks and new advancements have returned a new focus on OPAC improvement with online indexes now being offered all things considered libraries the nation over. Since the improvement of the initial two prominent online inventories, both have been refreshed to use and incorporate ongoing advances and flow search conventions. Today, numerous schools and colleges offer a type of online community index to help their library user's access the materials housed in their libraries. Most open libraries have likewise built up their own forms of an OPAC, making data promptly accessible to library guests.

Findings

The OPAC is one of the best search engine being used in colleges and universities. The future of libraries very much depend on the application, usage and providing the cutting edge latest technologies such as OPAC to provide the best services and facilities to the library users.

Conclusion

The choices to utilize OPAC are dependent upon an assortment of variables, from the discoveries. The need to do more in improving the OPAC abilities of understudies can't be overemphasized as this will empower them successfully use the OPAC and tap from the huge advantages that accompanies it. Indeed in spite of the fact that the respondents show an uplifting towards OPAC the degree of use of OPAC is generally low, this position means that helpless information on controlling OPAC frameworks. More is needed in showing understudies other than PC appreciation, different hunt strategies and methods as this will improve their viability in the utilization of OPAC frameworks. Issues like poor power supply, absence of PC frameworks and so on that hinders the utilization of OPAC in college libraries ought to be put to check.

Recommendations

1. Endeavours ought to be outfitted towards instilling on college understudies the information and abilities needed to utilize OPAC.

2. Colleges ought to be outfitted with the empowering framework like satisfactory force supply, powerful Internet network and so on that will support the utilization of OPAC.

3. College libraries ought to form strategies that would support compulsory utilization of OPACs.

References

1. Aruna, A. 1998.Online Public Access catalogue. DESIDOC Bulletin of Information technology. 8(.5):3-8. 6.

2. Nath, A and Sharma, A 2006. Use of Online Public Access Catalogue by the Research Scholars in Panjab University Library, Chandigarh: A Survey. Library Herald 44 (3): 212-22.

3. Hussain, R and Ansari, M. A. 2006.From catalogue to web OPAC. DESIDOC Bulletin of information Technology.26 (2):41-7.

4. Singh, R. P, Naidu G.H.S. and Jadon G. S.2008. Use of online public access catalogue in Devi Ahilya University Library Indore. SRELS Journal of Information Management. 45(.1):55-62.

5. Mulla, K. R. and Chandrashekara, M. 2009.Access of Web-OPAC in Engineering College Libraries in Karnataka: A survey. SRELS Journal of Information Management, 46(3):321-32.

6. Islam, M. 2010. The use of the library catalogue by undergraduate. Library Philosophy and Practice (e-journal).

7. Ebiwolate, P.B. 2010.The use of the library catalogue by undergraduate students in NIGER Delta University library. Library Philosophy and Practice (e-journal).

8. Kumar, S and Vohra, R. 2011.Use of online public access catalogue in Guru Nanak Dev University library, Amritsar: a study. SRELS Journal of Information Management, 48 (5):519-28. 9

9. *Velmurugan V. S., Amudha G. (2012) "Usage patterns of OPAC among faculty members in Indian colleges. Mass Communicator: In International Journal of Communication Studies. 6(3): 37-40*

10. *Ukperbor, C.O. 2012 .Restoring the library OPAC toward usability by undergraduate students of the University of Benin. International journals of Science and Technology. 1(4):184-88.*

11. *Ukperbor, C.O. 2012 .Restoring the library OPAC toward usability by undergraduate students of the University of Benin. International journals of Science and Technology. 1(4):184-88.*

12. *Sankari, R. L, Chinnasamy, K and Balasubramaniam, P .2013. A study on the use of online public access catalogue (OPAC) by students and faculty members of Unnamalai institute of Technology in Kovilpatti(Tamil Nadu). International Journal of Library and Information Studies. 3(1):17-26.*

13. *Devendra and Nikam. K. 2013. Attitudes of law university library users towards the use of OPAC/Web OPAC in Andhra Pradesh: A study. SRELS Journal of Information Management. 50(3): 327-35.*

14. *Narang and Singh S. 2013. Use of online public access catalogue by the research scholars of Guru Nanak Dev University, Amritsar: A study. SRELS Journal of Information Management. 50(2):191-200.*

Cloud Based Tools and Techniques for Modern Library and Information Services

Gautam Soni
Assistant Librarian
Dr Bhagwandas Central Library
Mahatma Gandhi Kashi Vidyapith
Varanasi (A U.P. State University), UP, India

Abstract

The Idea of this article is to highlight the different cloud based tools and techniques available freely of internet and can be used to provide more effective library and information services to user community.

Keywords: Cloud Computing, Cloud Tools, Cloud Services, LIS Services.

Introduction

In a world where "everything is on the Internet," public perception is that libraries are antiquated. The reality is that in a world of information overload, libraries are a valuable resource to vet credibility and, often, are the only guardians of content created in the pre-Web world. Now more than ever, the job of Librarian is about helping people access information. Curation, cataloging, and discovery librarians sift through the continuing avalanche of written information to unearth the gems. In addition to helping individual librarians with the job of information sharing, Cloud services also present opportunities for libraries to innovate and improve. With increasing access to Big Data, Cloud services are building unique services and discovery engines that library patrons will love. Cloud

services offer interactive features that will lead to increased engagement and a better user experience for patrons and librarians.

The question facing the modern librarian is how to connect with today's tech-savvy populace and keep content accessible despite budget cuts. Interestingly, harnessing "the Cloud" may be the solution to both problems. Here are 35 ways librarians can use the Cloud to improve services, streamline their job and do more with less.

Why Cloud Services

1. Collaborate in the Cloud with productivity suits and project management tools
2. Use Cloud storage to collaborate share files and sync digital libraries
3. Save time and streamline patron services with Cloud based support and a virtual reference desk
4. Use Cloud services to curate digital content and make resources available online.
5. Automate tasks and create apps for aggregating or sharing information.
6. Video creates more opportunities for collaborative learning and sharing.
7. Cloud tools for building better user experiences for patrons and librarians.

Cloud tools work as an alternative to Microsoft's expensive Office Suite. Under mentioned products to save money on expensive software licensing while also keeping software current with more frequent updates. These Cloud apps may also integrate with automation services for increased productivity and efficiency.

Google Apps is a cloud-based productivity suite that includes tools for email, calendars and documents. The Los Angeles Public Library is the largest library to make the switch to Google, in a cost-saving deal that phased out Microsoft Office products in 2009.

Office 365 lets users read and edit Office docs in a browser on PCs, Macs and tablets. Store and share docs using Sky Drive. If you are already using Microsoft products, Office 365 will get you and your team working in the Cloud with the least amount of friction. Start editing Word documents and Excel spreadsheets online. Then, store it all in SkyDrive for collaborative access.

Zoho is a suite of online web applications geared towards increasing productivity and offering easy collaboration. Zoho's tools are another Microsoft replacement upgraded with additional features possible thanks to Cloud technology. For example, Zoho Show is a PowerPoint alternative that allows librarians to create, share and store presentations online. Create a "Show" to accompany a live presentation and let participants access the content later as an additional resource.Another smart use of Zoho's cloud tool is demonstrated on the Clayton State University website. The school uses Zoho's Live Chat widget to let readers "Ask a Librarian" and get real-time help during business hours.

Basecamp is among the most popular web-based project management and collaboration tools. It tracks to-do lists, allows file uploads, archives messages, and can be integrated with other Cloud services using apps like Zapier and IFTTT. According to Barbara Lewis, Coordinator for Digital Collections at University of South Florida Tampa, her library uses Basecamp "to plan, track and report project statuses" in the daily management of its busy library.

Redbooth previously Teambox organize departments, track projects, assign tasks and get more accomplished. Like Basecamp, Teambox integrates with automation tools like Zapier.

Central Desktop offers an alternative to email, is less IT-heavy than SharePoint implementations and more functional than simple file-sharing sites. They call it a SocialBridge with customized versions for different types of teams. Chris Tonjes, former Chief

87

Information Officer at District of Columbia Public Library, spearheaded the transition to Cloud services, including Central Desktop, during his tenure because it enhances collaboration. The change allowed DClibrary.org to go from two contributors to more than 40 active participants. Librarians can now focus on content and explore creative ways to share media.

Dropbox stores photos, docs, and videos and access the files from anywhere. Data files can be shared easily using public folders — a real bonus for librarians who deal with the media and partner organizations. Store images and press release documents in Dropbox, then let journalists access the information with a special download link. No more worrying about file size restrictions when sending large email. Dropbox is a great way to keep an ebook library synced across multiple devices. Load up a Dropbox account with DRM-free ebooks (like those from Project Gutenberg) and connect each ereader to the account. Now you can save time by keeping the reading material synced across all devices at managing everything from a single location.

Box includes a collection of data collaboration tools that make it simple to share files internally and with external partners, clients and vendors. The service is similar to Dropbox and can be used in much the same way for sharing files with outside users or syncing files across multiple computers. Want to share a promotional poster, marketing flyer or presentation with a librarian at another branch? Add it to your Box account and it will be available for her download immediately.

Sugar Sync automatically syncs files and folders across multiple computers, tablets and smartphones. The service also stores the last five versions of your files so it's easier to rollback if a collaborator overwrites the wrong file. Revisions are a useful safeguard for librarians that work on committees and need to edit shared documents.

HipChat offers hosted group chat and instant messaging for teams that improves real-time collaboration through persistent connections, file sharing and saved chat history. This is a great service for librarians in larger cities with multiple branches. Use HipChat for quick meetings with department heads in different locations. A bonus is that the archives serve as a transcript of the meeting, keeping track of who said what and increasing transparency. Question Point is a virtual reference service that provides around-the-clock, real-time reference assistance from professional librarians. Librarians team up and take turns answering questions, so when you're not available patrons can still talk to a real librarian for expert assistance.

ZenDesk combines a self-service knowledge base with a centralized messaging system for customer communication. ZenDesk is an intuitive way for patrons to help themselves. Librarians can still moderate the forum and help with unanswered questions, but the time required to oversee the forum will be less than the time required to answer each support question that typically flows through the information desk.

LiveChat offers a real-time chat alternative to phone and e-mail that speeds up support response times. It also archives each interaction with reporting options so you can learn more about what your patrons want. LiveChat is a versatile tool that can do more than tech support. Because it works in real time, it can also be used to power a virtual reference desk.

UserVoice integrates feedback, helpdesk, and knowledge base management tools in one platform that works on PCs and mobile devices. Use it to gather feedback, answer questions and provide a searchable archive of support requests.

Freshdesk automatically converts emails, Twitter mentions and comments on your Facebook pages into support tickets so

librarians can answer questions and provide guidance from a single system. It's a great tool getting organized and it's easy to use.

Delicious.com is a great place to curate and share a link directory. Use tags for special research projects. Swiss Army Librarian has a guide to using Delicious to create a Library Subject Guide.

URList (no longer active) make it easy to organize and share lists of links. Create a topical list of links, divide it into subsections, and share the whole list with a single short URL. Librarian's Quest posted this article on how to create a reference list using the 2013 Newbery Caldecott award winners as an example.

FlipBoard allows users to curate new information from news sources, periodicals and social media. Create a topical magazine that library patrons can subscribe to follow via the app. Flipboard is best for ephemeral curation or current events. Librarians can catch up with "What's new in the world of libraries" on the Flipboard curated by Jan Holquist or read up on new tools for librarians with Aaron Tay, a Senior Librarian from the National University of Singapore. Read Tay's blog post about curation tools for librarians to find similar tools.

Flickr is a great place to host historical images that are in the public domain. One of the most famous implementations of this comes from The Library of Congress which hosts nearly 20,000 photos categorized into sets for browsing by interest. Librarians at the Roselle Public Library Districttake a different approach, using Flickr to promote events and connect with the community.

Encore is a content discovery platform for sorting through vast catalogs of data. Use it to create a digital archive like this one from the Long Beach Public Library in California which hosts a repository of local history, that is accessible to residents and anyone interested in researching Southern California history. As a bonus, hosted media can be shared across any number of social media sites as seen on the LBPL's Pinterest board.

LibraryThing started as a place for users to catalog books, but has also been extended with useful tools for libraries. A simple idea for getting started is for librarians to create a custom list of suggested books for summer reading and using the easy-to-embed Book Display Widget to promote the list on the library's website or Facebook page. See more neat ideas for book widgets on the LibraryThing blog. A more ambitious project could include building an integrated library catalogue system like volunteer librarian Colm O'Conner did for the National Print Musem in Dublin, Ireland.

Zapier lets non-programmers automate tasks by connecting events from more than 200 other online services. Use automation templates called "Zaps" to handle simple administrative tasks like automatically saving attachments, creating calendar items from to-do items, and free up your time for more important things.

If This, Then That is a lot like Zapier. It has fewer integration tools, but it's also completely free. IFTTT has thousands of user-created "Recipes" — snippets of code to accomplish a task — that make it easy to get started right away. InformationTwist offers this guide to using IFTTT where he explains how he uses the service to aggregate library news for use as blog posts and tweets.
Another smart use for the service is the ability to crowdsource and archive local images from the community. Use a recipe to follow a hashtag on Instagram and automatically save photos to a folder on Dropbox (like this one for #ilovereading). For the best results, create a unique hashtag (like for an annual event or ongoing program) and promote it within your community.

SnapLogic another modular system for connecting data sources with online applications. SnapLogic is enterprise-level software, so the technical learning curve may be higher although tech-minded librarians may find the rewards are worth the effort.

TrackVia is a collaborative database solution that allows everyday users to manage information online. Start with a

91

spreadsheet and create a mini-app for sharing data or collaborating in the Cloud.

HyperBase has the power of a custom database without the complex software infrastructure. Use drag-and-drop modules to create forms that collect data and make it available for use and analysis. If you're currently using Microsoft Access, HyperBase is an online alternative for managing data in the Cloud.

OCLC is a worldwide cooperative with programs that advance librarianship and help librarians continue to develop the skills they need to meet the challenges of a demanding library environment. Their strategy is to help libraries archive the benefits of Webscale by working together.

Google Hangouts takes any event live in front of a global audience. Schedule events in advance to let guests RSVP their attendance. Record a Hangout for sharing later on YouTube. Johannes Neuer, associate director of marketing for NYPL praised Hangouts in this article from American Libraries Magazine about how librarians can use social media.

Skype started as a way to make free Internet calls, but it's evolved into a full-featured residential VoIP communication tool with instant messaging, file sharing, group video and screencasting. Used for video calls, Skype offers interesting opportunities for librarians to add value to library programs. Consider setting up a Skype call with out-of-town authors for an audience Q&A, or having a children's author read "live" via Skype for story hour.

GoToWebinar is more formal than a Hangout, but comes with a few caveats — pricing and advance registration requirements. There are benefits too, such as more control over branding and presentation. Increased privacy and live-recording options make GoToWebinar a great choice for training events. Live events can be archived and used later to train new hires as well.

3M Cloud Library Subscribed libraries can offer patrons an innovative way to browse, borrow and read popular e-books.

32. LibGuides empowers librarians with Web tools to help patrons find the stuff they need and show them information they didn't even know existed.

Bibliocommons adds interactive features to library items with user reviews, comments and ratings. It also allows for increased engagement by letting users create and share book lists. Christina de Castell, Director of Resources & Technology explains why her team at Vancouver Public Library chose Bibliocommons to improve book discovery features with user reviews, ratings and recommendations.

LibLimeKoha is an open-source Integrated Library System that can move the entire system to the Cloud. It offers Web-based patron services, community outreach, and catalog management.

OverDrive lends eBooks, audiobooks, music and video to users from a hosted, digital library. Borrowers get access to titles from top publishers on almost any device, libraries get resources to support and promote ereading.

For librarians stuck using proprietary technology, the Web is a lonely place. Unlike internal systems that can be expensive or impossible to connect with external users, the Cloud makes it a relatively painless process to share and collaborate with others. These systems can simplify collaboration between librarians and academics from different organizations. Plus, they are operating system agnostic.

Providing "tech-support" often falls to the librarian on duty and it can be time consuming to answer the same help requests day after day. Cloud-based tech support may include options such as an archive of previously-answered questions, a moderated forum where users can help each other; or integration with social media so questions asked on Facebook and Twitter are managed in a central location. Moving support services to the Cloud can free up valuable

time for a busy librarian and allow patrons to access services at their convenience.

Cloud computing offers many ways to make data more social. Once online, librarians can share data to boost a library's online presence, attract fans and connect with interested users. In addition, crowd sourcing through social media is a smart way to gather information that might otherwise be very costly — or not available at all.

Conclusion

The power of the Cloud is it's potential to integrate services. While it can be quite complex, there are also services that specialize in helping non-developers harness this power. With the Cloud and a little creativity, librarians can build amazing useful tools without a single tech support of IT department.Cloud technology is all about collaboration with integration tools and APIs that make it possible for developers to access information and use it amazing ways. When data becomes accessible, wonderful things happen. Libraries storing information on the Cloud can forge data-sharing partnerships, monetize through data-licensing and innovate data-discovery services to connect with modern information seekers. Librarians are curators of information, these services offer a way to bring it to the Cloud and distribute it.In addition to helping individual librarians with the job of information sharing, Cloud services also present opportunities for libraries to innovate and improve. With increasing access to Big Data, Cloud services are building unique services and discovery engines that library patrons will love. These Cloud services offer interactive features that will lead to increased engagement and a better user experience for patrons and librarians.

References

1. *https://getvoip.com/blog/2013/08/13/35-powerful-cloud-tools-for-modern-librarians/*
2. *https://phoenixnap.com/blog/cloud-monitoring-tools*

3. *https://oedb.org/ilibrarian/21-useful-cloud-computing-resources-for-librarians/*

4. *https://www.degruyter.com/document/doi/10.1515/978311060891 5/html*

5. *https://www.researchgate.net/publication/276060801_Cloud_Co mputing_And_Its_Application_In_Libraries*

6. *https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=2397& context=libphilprac*

7. *http://www.ala.org/tools/article/ala-techsource/library-20-gang-0509-cloud-computing-libraries-and-oclc*

8. *https://scholarcommons.sc.edu/cgi/viewcontent.cgi?article=1006 &context=aiken_gregg_graniteville_library_facpub*

9. *http://eprints.rclis.org/29058/1/R%20Sahu.pdf*

पुस्तकालय में उपयोगकर्त्ता खोज व्यूह रचना
(User Search Strategy in Library)

सुमन कुमारी

अतिथि व्याख्याता

फण्डामेन्टल एजुकेशन वेलफेयर ट्रस्ट

के0आर0सी0—मौलाना मजरूल हक

अरबी फारसी वि0वि0, पटना, बिहार, भारत

सारांश

इस शोधपरक आलेख में खोज व्यूह रचना का अर्थ, व्यवस्थापन खोज तकनीक खोज व्यूह रचना का कार्यान्वयन, मूल्यांकन एवं फीडबैक तथा महत्व को सरल एवं सुस्पष्ट रूप में दिखाने का प्रयास किया गया है। यह आलेख पुस्तकालय में उपयोगकर्त्ता खोज व्यूह रचना को पूर्णतः परिभाषित करता है।

प्रस्तावना

उपयोगकर्त्ता खोज व्यूह रचना को समग्र रूप से जानने के लिए उपयोक्ता, खोज एवं व्यूह रचना इन तीनों पक्षों का व्याख्या करना आवश्यक हो जाता है। उपयोगकर्त्ता वह है जो आमतौर पर कुछ का उपयोग करता है। उपयोगकर्त्ता शब्द अंग्रेजी भाषा के USER (यूजर) शब्द का हिन्दी रूपान्तरण है जो लैटिन भाषा के शब्द Usuarius (उसुआरिओस) से बना है। जो उस व्यक्ति को संदर्भित करता है जो किसी प्रकार की वस्तु का उपयोग करता है या जो किसी सेवा को प्राप्त करता है।

96

पुस्तकालय के संदर्भ में पुस्तकालय उपयोगकर्त्ता से तात्पर्य उस व्यक्ति से है जो पुस्तकालय के पाठ्य सामग्री का उपयोग अथवा अर्जन ज्ञान प्राप्ति के उद्देश्य से करता है।

कुछ ढूढ़ने के लिए भली भांति की गई देखने की गतिविधि को खोज कहते है। पुस्तकालय एवं सूचना विज्ञान के संदर्भ में खोज से तात्पर्य वांछित सूचना ढूढ़ने के लिए अभिलेखों को ध्यान पूर्वक देखना है। अथवा किसी तथ्य तक पहुँचने के लिए किये गए प्रयास से है। अर्थात संग्रहीत सूचना में से वांछित सूचना को प्राप्त करने के लिए किये गए प्रयास खोज कहलाता है।

किसी लक्ष्य की प्राप्ति के लिये बनायी गयी कार्य योजना को सामान्य अर्थ में व्यूह रचना अथवा रणनीति (Strategy) कहते है। यह शब्द मूलतः सैन्य विज्ञान से आया है। जिसका अर्थ है किसी लक्ष्य की प्राप्ति के लिए बनायी गई कार्य योजना अर्थात अनिश्चय की स्थिति में वांछित लक्ष्य की प्राप्ति के लिए बनाई गई कार्य योजना। खोज व्यूह रचना अथवा रणनीति अंग्रेजी शब्द Strategy को हिन्दी रूपान्तरण है जो ग्रीक शब्द Strategia (स्ट्रेटजिया) से लिया गया है जिसका अर्थ सामान्य की कला होती है। 19वीं शताब्दी में इस शब्द का प्रयोग किया गया तब इसे सेनानायक की कला अथवा सैन्य विन्यास के संकुचित अर्थो में किया जाता था। विस्तृत अर्थो में 20वीं. शताब्दी में किसी लक्ष्य की प्राप्ति के लिए किया गया कार्य योजना के रूप में किया गया। पुस्तकालय में सूचना उपयोगकर्त्ता अथवा पुस्तकालय उपयोगकर्त्ता द्वारा सूचना प्राप्त करने या सूचना तक पहुँचने या खोजने के लिए जो कार्य योजना तैयार किया जाता है उसे हो उपयोगकर्त्ता खोज व्यूह रचना कहा जाता है।

खोजव्यूह रचना का व्यवस्थापन (Formulation of Search Strategy)

उपयोगकर्त्ता द्वारा सूचना संग्रह में से वांछित सूचना की प्राप्ति को तार्किक एवं वैज्ञानिक बनाने के लिए सूचना संग्रहण एवं पुनर्प्राप्ति प्रक्रिया के अन्तर्गत खोज व्यूह रचना / रणनीति की कार्य विधि का व्यवस्थापन किया जाता है। इसका आधार मुख्य रूप से उपयोगकर्त्ता के स्तर के अनुरूप किया जाता है। इसलिए इसके कार्य प्रणाली के अन्तर्गत निम्नलिखित व्यवस्थापन की आवश्यकता होती है।:—

1. शब्दकोष व्यवस्थापन
2. संख्यात्मक व्यवस्थापन
3. वर्गीकृत व्यवस्थापन

शब्दकोष व्यवस्थापन

ऐसी व्यवस्था जिसमें शब्दों को भाषा के वर्णानुक्रमानुसार व्यवस्थित किया जाता है। वर्ण क्रमानुसार वह क्रमावली है जो कि भाषा की लिपि में विशिष्ट वर्ण की स्थिति पर आधारित होता है। उदाहरणतः अंग्रेजी वर्णमालाा रोमन लिपि के ए, बी, सी (A,B,C...........) के क्रम में व्यवस्थित होते है।

संख्यात्मक व्यवस्थापन

संख्यात्मक व्यवस्थापन वह व्यवस्था जिसमें संख्या को आरोही अथवा अवरोही क्रम में व्यवस्थित किया जाता है। उदाहरणतः—

134.23

245.15

245.63

वर्गीकृत व्यवस्थापन

पुस्तकालयों में पुस्तकों को उसके विषय के आधार पर किसी सर्वमान्य वर्गीकरण प्रणाली के द्वारा वर्गीकृत किया जाता है। वर्गीकृत विषय को उसके वर्गक्रम संख्या के आधार पर ही शैल्फ पर व्यवस्थित

किया जाता है। उदाहरणतः डी.डी.सी़ वर्गीकरण प्रणाली के द्वारा वर्गीकृत विषय का व्यवस्थापन निम्नानुसार किया जायेगाः–

321.4

322.5

322.6

327.397 इत्यादि

खोज व्यूह रचना के लिए खोज तकनीक (Search Technique for Search Strategy)

खोज तकनीक एक क्रियाविधि है जिसके माध्यम से कोई भी व्यक्ति सूचना प्रणालियों में से वांछित सूचना ढूढ़ सकता है। सूचना प्रणाली चाहे वह अंतरंग हो अथवा ऑनलाईन हो, भण्डारित सूचना से वांछित सूचना जिस क्रियाविधि के माध्यम से प्राप्त किया जा सकता है उसे खोज तकनीक कहा जाता है।

अंतरंग प्रणाली वह है जिसमें सूचना की पुनः प्राप्ति के उद्देश्यों से सूचना को किसी संगठन के विस्तार क्षेत्र के भीतर ही भंडारित किया जाता है। ऑनलाईन प्रणाली वह प्रणाली होती है जिसमें इलेक्ट्रॉनिक माध्यम का प्रयोग भण्डारण के लिए किया जाता है।

सूचना खोज के लिए उपयोगकर्त्ता द्वारा सूचना खोजव्यूह रचना के अन्तर्गत निम्नलिखित खोज तकनीक प्रयोग में लाया जाता हैः–

1. बूलियन संचालक
2. फील्ड वेस्ड सर्च (क्षेत्र आधारित)
3. ट्रकेषन सर्च (संक्षेपन करके खोज)
4. प्रॉक्सिमिटी सर्च (सान्निध्यता खोज)
5. लिमिटिंग सर्च (सीमितिकरण खोज)
6. डेटाबेस सर्च

बूलियन संचालक (Boolean Operator)

बूलियन संचालक बहुत ही सरल शब्द होते है– AND, OR एवं NOT जिन्हे खोज क्रिया में मुख्य शब्द को जोड़ने अथवा अलग करने के लिए संयोजक के रूप में प्रयुक्त किया जाता है। इसका प्रयोग खोज पदों को परस्पर जोड़ने अथवा परिभाषित करने के लिए किया जाता है। अतः इस माध्यम से परिणामों को और अधिक सटीक एवं उपयोगी बनाया जाता है। बूलियन तर्क (Boolean Logic) के तीन संचालक तार्किक उत्पाद (X) AND, तार्किक योग (+) OR तथा तार्किक अन्तर (-) NOT है। उपर्युक्त तीनों संचालकों को निम्न विवरण में समझा जा सकता है।

बुलियन खोजः– उपयोक्ता को खोज हेतु बूलियन खोज प्रक्रिया का उपयोग करते हुए खोज रणनीति बनाना है। बुलियन ऑपरेटर्स (AND, OR, NOT) रणनीति हेतु बनाये गये खोज–पदो के बीच संबंध की ओर इंगित करती है।

तार्किक उत्पाद एण्ड (AND)

इसमें खोज पद को जोड़ने हेतु तार्किक एण्ड (AND) द्वारा दो या अधिक खोज पद संयोजित किये जाते है। उदाहरणार्थ यदि उपयोक्ता Child Psychology से संबंधित सामग्री खोज रहा है तो इसके लिए उसे संयोग विकल्प का चयन करना होगा, अतः Child Psychology की खोज के लिए Child Psychology जैसा खोज कथन प्रस्तुत करना होगा। खोज परिणाम के रूप में Child और Psychology से संबंधित उपलब्ध समस्त सामग्री प्राप्त होगा।

तार्किक योग और (OR)

उपयोक्ता को वैकल्पित पदों को खोजने में तार्किक योग OR सहायता प्रदान करता है। यदि दो खोज पदों को तार्किक योग OR द्वारा संयोजित किया जाता है तो खोज परिणाम में दोनों खोज पदों में से कोई भी पद के सामग्रियों की सूची प्राप्त होगी, इस प्रकार Nuclear or Atomic

खोज कथन प्रस्तुत करने पर दोनों में से कोई भी पद के सामग्रियों की सूची प्राप्त होगी।

तार्किक भेद नॉट (NOT)

तार्किक भेद नॉट NOT का प्रयोग पद विशेष को छोड़कर खोजने में सहायता प्रदान करता है। तार्किक भेद नॉट NOT के दायीं ओर उल्लेखित पद से संबंधित सामग्रियों को छोड़कर खोज परिणाम प्राप्त होता है। यदि Rockets NOT Enginers को छोड़कर Rockets से संबंधित सभी सामग्रियों की सूची प्राप्त होगी।

(ख) क्षेत्र आधारित खोज (Field based Search):-

वांछित सूचना प्राप्त करने के लिए किसी विशिष्ट क्षेत्र के डेटाबेस पर की गई खोज को क्षेत्र आधारित खोज कहा जाता है। जैसा कि हम सभी जानते है कि सूची की सम्पूर्ण सूचना को संदर्भ ग्रंथपरक डाटाबेस में विभिन्न क्षेत्रों में भण्डारित किया जाता है। यदि उपयोगकर्त्ता लेखक के नाम से सूचना प्राप्त करना चाहता है तो सर्च इंजन को लेखक क्षेत्र के लिए निर्देश दें। इसी प्रकार उपयोगकर्त्ता अपने अभिगम क्षेत्र के अनुसार सूचना प्राप्त कर सकता है।

संक्षेपन खोज (Truncation Search)

संक्षेपन खोज, खोज की वह तकनीक है जिसमें किसी ऐसे शब्द के विभिन्न रूपों के लिए खोज क्रियान्वित की जाती है जिनका विकास एक समान्य मूल धातु पद से हुआ हों। सूचना पुर्नप्राप्ति प्रणाली में यह तकनीक सर्वाधिक व्यापक रूप से अपनाया जाता है। इस तकनीक में मूल धातु पद को संक्षेपन चिन्ह के साथ खोज क्रियान्वित की जाती है। उदाहरण स्वरूप यदि हम Catalogue शब्द की खोज करते है तो वे सभी अभिलेख मुझे पुनः प्राप्त होंगे जिनमें Catalogue शब्द की खोज करते है तो वे सभी अभिलेख मुझे पुनः प्राप्त होंगे जिनमें Catalogue शब्द का

प्रयोग हुआ है या आंशिक रूप से शब्द मौजूद है। इसके निम्न प्रकार है:–

1. राइट ट्रंकेशन
2. लेफ्ट ट्रंकेशन
3. लेफ्ट–राइट ट्रंकेशन
4. मिडिल ट्रंकेशन

सान्निध्यता खोज (Proximity Search)

कुछ सर्च इंजन उन्नत किस्म के संचालक उपलब्ध कराते है जिसे सान्निध्यता खोज या प्रोथ्सिमिटी खोज (Proximity Search) कहा जाता है। जो उपभोक्ता के किवर्डस की दूरियाँ को परिभाषित करने में सहायता करता है। यह खोज तकनीक खोजकर्त्ता को दो पदो के परस्पर अन्तर को परिभाषित करने की अनुमति देती है। यह दो पद चाहे एक दूसरे के साथ–साथ हो अथवा खोज के पदो के बीच में एक या एक से अधिक पद आते हो अथवा खोज के पद एक ही अनुच्छेद में प्रयुक्त होने, फिर चाहे उनके बीच में अन्य शब्द हस्तक्षेप कर रहे हो, इत्यादि। इस उद्देश्य की प्राप्ति के लिए इस तकनीक के अन्तर्गत विभिन्न सर्च इंजन प्रचालकों के विभिन्न समुच्चयों का प्रयोग करते है।

सीमितकरण खोज (Limiting Search)

इस खोज तकनीक में एक खोजकर्त्ता स्ट्रिंग को डेटाबेस की संरचना के अनुसार सीमित कर देता है अझेर इसी स्ट्रिंग के विभिन्न क्षेत्रों में खोजता है। उदाहरण के लिए यदि खोई खोजकर्त्ता Development of Library by S.R.Ranganatahan को खोज रहा है तो इस खोज स्ट्रिंग को दो छोटे स्ट्रंग में तोड़ दिया जाएगा, जैसे– Development of Library ,oa S.R.Ranganatahan इसमें एक को टाइटल फिल्ड में रखा जाता है और एक सब टाइटल (Sub Tittle) अर्थात उप–आख्या क्षेत्र में रखा जाएगा। इसमें Development of Library को मुख्यतः क्षेत्र में रखा जाता है और

S.R.Ranganatahan को लेखक क्षेत्र में डाला जाएगा तत्पश्चात खोज को क्रियान्वित किया जाएगा।

डेटाबेस खोज (Database Search)

डेटाबेस व्यवसाय, स्वास्थ्य, शिक्षा, सरकार और पुस्तकालय सहित सभी प्रकार के संगठनों में डाटा को स्टोर मेनिप्यूलेट तथा रिट्राइव करने के लिए प्रयुक्त होता है। डाटा से तात्पर्य है– अपूर्णज्ञात तथ्य व ऑकड़े जिन्हें रिकार्ड किया जा सकता है और जो कुछ परिणाम दे सकते है।

सामान्यतः डेटाबेस मशीन पठनीय रूप में संचिका होता है। डेटाबेस सूचना संग्रह का वह स्वरूप है जो कम्प्यूटर के मैगनेटिक टेप। डिस्क में अभिलेखबद्ध होता है तथा जिसका अवलोकन करने के लिए कम्प्यूटर का प्रयोग करना पड़ता है। इस प्रकार डेटाबेस सूचना स्त्रोत का एक अत्यंत ही आधुनिक रूप है जिसमें सूचना की खोज मानवश्रम विधि से न होकर मशीनी क्रिया द्वारा किया जाता है।

खोज व्यूह रचना का कार्यान्वयन (Implimention of Search Strategy)

खोज व्यूह रचना कार्यान्वयन एक ऐसी प्रक्रिया है जिसके माध्यम से एक चुनी हुई रणनीति को लागू किया जाता हे। यह किसी संगठन के रणनीतियों को निष्पादित करने में शामिल विभिन्न गतिविधियों को संदर्भित करता है। सरल शब्दों में खोज व्यूह रचना अथवा रणनीति कार्यान्वयन विभिन्न प्रक्रियाओं, योजनाओं और कार्यक्रमों के माध्यम से एक संस्था या संगठन की रणनीतियों पर प्रकाश डालता है। कोई भी पुस्तकालय या सूचना केन्द्र उपयोगकर्त्ता के खोज अभिगम को सरल बनाने के लिए खोज व्यूह रचना के अन्तर्गत जो प्रक्रिया अपनाते है उससे उपयोगकर्त्ता को वांछित लाभ प्राप्त हो सके, इसके लिए अपनायी गई प्रक्रिया को रणनीति कार्यान्वयन या खोज व्यूह रचना (Search Strategy) का कार्यान्वयन कहते है। इसके लिए संगठन का उद्देश्य, उपयोगकर्त्ता की आवश्यकता, सूचना प्रणाली, खोज तकनीक इत्यादि को आधार बनाया जाता है।

मूल्यांकन एवं प्रतिपृष्टि (Feedback)

खोज व्यूह रचना के अन्तर्गत उपयोगकर्त्ता के खोज परिणामों के मूल्यांकन में उपयोगकर्त्ता एवं सूचनादाता दोनो की भागीदारी होती है। इसी के आधार पर परिणामों की गुणवत्ता और मात्रा का आकलन किया जाता है। खोज कितना प्रभावी है यह खोज तकनीक की कार्य प्रणाली एवं उपयोगकर्त्ता द्वारा खोज तकनीक के व्यवहार पर निर्भर करता है। इसे खोज प्रक्रिया मॉडल द्वारा निम्न प्रकार समझा जा सकता है:–

चित्र संख्या–1
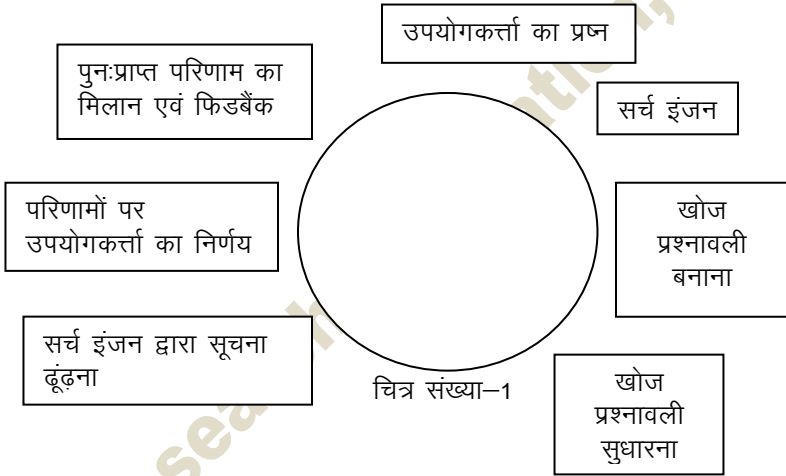
खोज प्रक्रिया मॉडल

निष्कर्ष एवं महत्व

इस प्रकार उपर्युक्त विवरणों पर दृष्टिगत करें तो निष्कर्षतः मै यह कह सकती हूँ कि सूचना प्राप्ति के लिए उपयोगकर्त्ता को खोज व्यूह रचना तैयार करना आवश्यक है। यह एक महत्वपूर्ण कदम है जब आप सूचना खोज कर रहे है। यह संगठन के लिए भी काफी महत्वपूर्ण होता है।

खोज व्यूह रचना के महत्व की बात करे तो निम्नलिखित बिन्दु इसके महत्व को उजागर करता है:–

1. यह उपयोगकर्त्ता को सही दिशा प्रदान करता है।
2. यह सही प्रबंधकीय व्यवहार प्रदान करता है।
3. यह सही समन्वय स्थापित करता है।
4. संसाधनों के सर्वोत्तम स्थापित करता है।
5. संसाधनों के सर्वोत्तम उपयोग को सक्षम बनाने मे मदद करता है।
6. भविष्य के प्रोग्रामिंग के साधन के रूप में कार्य करता है।

इस प्रकार खोजव्यूह रचना संगठन एवं उपयोगकर्त्ता के उद्देश्यों को स्पष्ट करती है तथा अनिश्चिता को कम करती है।

सन्दर्भ ग्रन्थ सूची

1. *http://catalog.loc.gov/help/tittle.htm*
2. *https://www.internettutorials.net/*
3. *basic-searchtechniques.asp*
4. *https://uj.ac.za/libguides.com*
5. *https://hi.m.wikipedia.org*
6. *www.businessmanagementideas.com*
7. *www.niosa.ac.in*
8. *श्रीवास्तव, अजय कुमार सूचना स्त्रोत सेवा एवं पुनर्प्राप्ति, यूनिवर्सिटी पब्लिकेशन, नई दिल्ली, 2010*
9. *नालंदा खुला विश्वविद्यालय का अध्ययन सामग्री*
10. *www.strategyskills.com>the-origin*

ऑनलाइन सार्वजनिक अभिगम प्रसूची (ओपेक)
Online Public Access Catalogue (OPAC)

आदित्य कुमार राय
ग्रन्थपाल
शासकीय आदर्श महाविद्यालय
उमरिया, मध्य प्रदेश, भारत

सूचना प्रोद्योगिकी ने हमारे जीवन के विभिन्न क्षेत्रों में क्रांतिकारी परिवर्तन किये हैं। इसने हमारे जीवन और जीवन शैली के लगभग सभी पहलुओं को बड़े पैमाने पर बदल दिया है तथा परिवर्तन की यह प्रक्रिया निरंतर जारी है। शिक्षा का क्षेत्र भी इससे अछूता नहीं रहा है। कंप्यूटर प्रोद्योगिकी स्कूल शिक्षा, कॉलेज शिक्षा, और विश्वविद्यालय शिक्षा में एक अतिरिक्त विशेष व्यावसायिक योग्यता के रूप में एक एकीकृत हिस्सा बन गया है। ग्रन्थालय के विविध क्षेत्रों पर भी सूचना प्रोद्योगिकी ने व्यापक प्रभाव डाला है। ग्रन्थालय ज्ञान के भंडार गृह व सीखने के केंद्र के रूप में माने जाते हैं। सूचना के स्रोतों का प्रसार और उन्हें उपयोगकर्ताओं को प्रदान करने के लिए करने के लिए ग्रंथालय सूचनाओं संग्रहित, व्यवस्थित, संरक्षित और प्रसारित करते रहें हैं। यह कहना अतिशयोक्ति नहीं होगी कि सूचना प्रोद्योगिकी ने ग्रन्थालय इस पूरी प्रक्रिया पर प्रभाव डाला है। सूचना प्रोद्योगिकी का पुस्तकालय पर पड़ने वाले प्रभावों का सबसे बड़ा उदाहरण ऑनलाइन सार्वजनिक अधिगम प्रसूची है।

हम सभी जानते हैं कि ग्रन्थालय विभिन्न रूपों जैसे पुस्तकें, जर्नल्स , समाचार पत्र, पांडुलिपियाँ, नक्शे, इत्यादि में दर्ज किए गए ज्ञान को संग्रहित और प्रबंधित करते हैं तो ऐसे में सामग्री की उसके उपयोक्ताओं तक त्वरित और आसान पहुँच प्रदान करने के लिए वांछित सामग्रियों के चयन, पता लगाने और पुनः प्राप्त करने के लिए पुस्तकालय कई उपकरण और तकनीकें अपनाते हैं। जिनमें से दो मुख्य उपकरण वर्गीकरण और प्रसूची हैं। वर्गीकरण जहां ग्रंथालय में उपलब्ध प्रलेखों को निधानियों पर सहायक अनुक्रम में व्यवस्थित करने हेतु उपयोग में लाया जाता है वहीं प्रसूची का उपयोग वांछित प्रलेख की उपलब्धता तथा ग्रंथालय में उसके स्थान का पता लगाने में होता है। यह उपयोगकर्ता को अपने लेखकों, शीर्षक, विषयों, श्रृंखला और संपादकों इत्यादि के द्वारा ग्रंथालय में उपलब्ध वांछित प्रलेखों का पता लगाने में सक्षम बनाता है। प्रसूची ग्रंथालयों में उपयोगकर्ता के लिए उपलब्ध संसाधनों का पता लगाने के लिए एक बहुत ही कुशल उपकरण माना जाता है. उचित प्रसूची के बिना कोई भी ग्रंथालय उपयोगी और लोकप्रिय नहीं हो सकता है।

ग्रंथालय प्रसूची (Library Catalogue)

ऑनलाइन सार्वजनिक अभिगम प्रसूची (ओपैक) पर चर्चा से पूर्व ग्रंथालय प्रसूची को समझना आवश्यक है। ग्रंथालय प्रसूची को ग्रंथालय का दर्पण कहा गया है, जो ग्रंथालय के संग्रह को प्रदर्शित करता है। यह उपयोगकर्ताओं को उनकी वांछित सामग्री को खोजने एवं प्राप्त करने में सहायता करती है। सी. ए कटर ने ग्रंथालय प्रसूची को परिभाषित करते हुए कहा है —-"A list of books which is arranged on some definite plan. As distinguished from a bibliography, it is a list of books in some library collections." जबकि मर्गेट एस टेलर ग्रंथालय प्रसूची को —"Bibliography is a list of books or manuscripts on a particular

107

subject. A catalogue is also a list but its scope is limited to a particular collection" कहकर प्रभाषित करती हैं।

ए. एल. ए. ग्लोसरी ऑफ लाइब्रेरी टर्म्स (ALA Glossary of Library Terms) में इसे परिभाषित करते हुए कहा गया है कि यह पुस्तकों, मान–चित्रों आदि की एक सूची है। जिसे कुछ निश्चित योजना के अनुसार व्यवस्थित किया गया है। यह ग्रंथ सूची से अलग है, यह एक ऐसी सूची, जो एक पुस्तकालय या पुस्तकालयों के एक समूह के संसाधनों को अभिलेखित, वर्णित और अनुक्रमित करती है।

इस प्रकार अगर सार रूप में कहें तो ग्रंथालय प्रसूची सम्बन्धित ग्रन्थालय में उपलब्ध प्रलेखों (किताबें, पत्रिकाओं, माइक्रोफिल्म, आदि) का उनके सामग्री के परिचय तथा स्थान के विवरण इत्यादि के साथ वर्णन करने वाली प्रविष्टियों का रिकॉर्ड है जिसे किसी निश्चित नियोजन अथवा मान्यता प्राप्त क्रम के अनुसार क्रमबद्ध रूप में तैयार किया जाता है।

ग्रंथालय प्रसूचियों का निर्माण कुछ उद्देश्यों को पूरा करने के लिए किया जाता है। कटर के अनुसार एक प्रसूची निम्न उद्देश्यों को पूरा करने के लिए बनायी जाती है

1.   किसी व्यक्ति को प्रलेख निम्न के द्वारा खोजने में सक्षम बनाना –

(अ) लेखक या

(ब) आख्या या

(स) विषय के द्वारा

2.   ग्रंथालय के पास निम्न पर क्या है इसको प्रदर्शित करना –

(अ) एक लेखक पर

(ब) एक दिए हुए विषय पर

(स) एक दिए हुए साहित्य पर

3.   पुस्तक चयन में सहायक होना –

(अ) उसके संस्करण द्वारा उसके कार्यों का वर्णन करना, उसे आसानी से पहचानना या

(ब) उसकी विशेषता को

ग्रंथालयों में साठ के दशक में प्रसूचियों के लिए कंप्यूटर का अनुप्रयोग शुरू हुआ, इसके बाद सूचना प्रौद्योगिकी के क्षेत्र में नवीन विकास ने धीरे धीरे इसमें क्रान्ति ला दी और फलस्वरूप, ऑनलाइन सार्वजनिक अभिगम प्रसूची (Online Public Access Catalouge - OPAC) प्रकाश में आया।

ग्रंथालय प्रसूचियों अनेक भौतिक रूप में उपलब्ध हैं उदाहरणार्थ— पुस्तक फॉर्म, सीफ फॉर्म, कार्ड फॉर्म, माइक्रोफिस, माइक्रोफिल्म इत्यादि. प्रसूची के उपरोक्त समस्त भौतिक प्रारूपों में कुछ न कुछ समस्याएं तथा सीमाएं थी जिनको बहुत हद तक कंप्यूटर के अनुप्रयोग के द्वारा निर्मित प्रसूचियों ने दूर किया।

ऑनलाइन सार्वजनिक अभिगम प्रसूची (Online Public Access Catalouge - OPAC) &

सूचना प्रौद्योगिकी का ग्रंथालय पर पड़ने वाले सबसे सुंदर प्रभावों में से एक ऑनलाइन सार्वजनिक अभिगमन प्रसूची है जिसे हम लोग संक्षेप में ओपेक बोलते हैं। ओपेक ने अपने से पहले प्रसूचियों के समस्त भौतिक स्वरूप में उपलब्ध समस्याओं और सीमाओं को दूर कर दिया ।

ए एल ए ग्लासरी के अनुसार— ओपेक एक कंप्यूटर आधारित और समर्थित पुस्तकालय प्रसूची (ग्रंथ सूची डेटाबेस) है जिनको टर्मिनलों के माध्यम से उपयोग करने के लिए डिजाइन किया गया है ताकि ग्रंथालय उपयोगकर्ता सीधे और प्रभावी ढंग से मानव मध्यस्थ जैसे पुस्तकालय के विशेष रूप से प्रशिक्षित कर्मचारी की सहायता से खोज कर सकताहै और उसके साथ ग्रंथ सूची रिकॉर्ड को पुनः प्राप्त कर सकता है।

109

पुस्तकालय और सूचना विज्ञान के लिए ऑनलाइन शब्दकोश इसको निम्न तरीके से परिभाषित करता है– ओपेक को ऑनलाइन पब्लिक एक्सेस कैटलॉग के सारांश के लिए प्रयोग किया जाता है, यह पुस्तकालय या पुस्तकालय प्रणाली के स्वामित्व वाली पुस्तकों और अन्य सामग्रियों का वर्णन करने वाले रिकॉर्ड से बना एक ग्रंथ सूची डेटाबेस है जो आम तौर पर संदर्भ डेस्क के पास केंद्रित सार्वजनिक टर्मिनलों या वर्क स्टेशनों के माध्यम से उपयोग किया जाता है। अधिकांश ऑनलाइन कैटलॉग लेखक, शीर्षक, विषय और कीवर्ड द्वारा खोजे जाने योग्य होते हैं तथा उपयोगकर्ताओं को, उसे डाउनलोड करने या रिकॉर्ड करने तथा उनको ई–मेल पर निर्यात करने की सुविधा प्रदान करते हैं

वेल्स के अनुसार, ऑनलाइन सार्वजनिक अभिगम प्रसूची के कम से कम तीन कार्य हैं। प्रथम, यह ग्रंथ सूची डेटाबेस के रूप में कार्ड कैटलॉग के इलेक्ट्रॉनिक संस्करण की तरह कार्य करता है, दूसरा, यह एक पोर्टलके रूप में कार्य करता है, जो एक पुस्तकालय के मुखपृष्ठ से भिन्न नहीं है और तीसरा, यह उस पुस्तकालय, उसके संग्रह और उसकी सेवाओं के लिए प्रचारक के रूप में कार्य करता है।

इस प्रकार ओपेक भी पुस्तकालय प्रसूची के बहुत सारे भौतिक प्रकारों में से एक प्रकार है। ये किसी ग्रंथालय या सूचना केंद्र के संग्रह को प्रदर्शित करने वाले कंप्यूटरीकृत प्रसूचियाँ है, जिनका सूचनाओं के भंडारण और पुनर्प्राप्ति के लिए उपयोग किया जाता है। सामान्य शब्दों में कहें तो ओपेक पत्रक सूची का एक इलेक्ट्रॉनिक स्वरूप है। ओपेक ग्रंथ प्राप्ति हेतु एक बहुत ही सफल उपकरण है। इसके माध्यम से हमे सीधे ही ग्रंथालय के संग्रहण जैसे ग्रंथ पत्र पत्रिकाएं दृश्य श्रव्य सामग्री ऑप्टिकल मीडिया आदि की वास्तविक उपलब्धता की जानकारी पा सकते हैं।

ओपेक के लाभ (Benefits of OPAC)

ओपेक ने ग्रंथालयों के पुराने भौतिक स्वरूप में उपलब्ध सीमाओं को बहुत हद तक खत्म कर दिया जिससे ग्रंथालयों का अधिकतम उपयोग संभव हो सका ओपेक निम्न कारणों से लाभदायक है –

1 यह किसी समय विशेष पर किसी ग्रंथ विशेष की खोज हेतु कई तरीकों को प्रदान करता है जो उपयोक्ताओं के लिए काफी सुविधाजनक है।

2 प्रसूची के निर्माण में पूरा ग्रंथापरक विवरण दे पाना ओपेक के माध्यम से संभव हो पाया जो ग्रंथालय के उपयोग को बढ़ाने वाला है।

3 ओपेक किसी ग्रंथ की सरकुलेशन स्थिति को भी बताता है।

4 प्रसूची अधिगम में स्थान की बाधाओं को ओपेक ने खत्म कर दिया है इसके माध्यम से हम स्थानीय, राष्ट्रीय व अंतरराष्ट्रीय स्तर पर अधिगम की सुविधा प्रदान कर सकते है।

5 ओपेक को अपडेट करना आसान होता है अतः इससे प्राप्त सूचनाएं अद्यतन होती हैं।

6 प्रसूची निर्माण में ग्रंथालय कर्मचारियों के लगने वाला समय और श्रम को कम कर मितव्ययता के सिद्धांत को प्रोत्साहित करता है।

ओपेक की सीमाए (Limitations of OPAC)

वैसे तो ओपेक अत्यंत सुविधाजनक है परंतु इसकी भी अपनी कुछ सीमाएं हैं। ओपेक के उपयोग हेतु उपयोक्ता का थोड़ा बहुत कंप्यूटर फ्रेंडली होना आवश्यक होता है साथ ही ओपेक अधिगम हेतु कंप्यूटर नेटवर्किंग की अच्छी स्पीड अच्छे कंप्यूटर तथा बिजली की उपलब्धता एक बड़ी समस्या है इसमें ग्रंथालय कर्मियों की भी सक्रिय सहभागिता अपेक्षित है।

ओपेक के अनुप्रयोग (Applications of OPAC)

ओपेक का सर्वप्रथम प्रयोग ओहियो राज्य विश्वविद्यालय ने किया था तब से लेकर आज तक ओपेक के कई स्वरूप देखे जा सकते हैं. कुछ प्रचलित अनुप्रयोग निम्नानुसार है–

वेब ओपेक (Web OPAC)

ओपेक के अनुप्रयोगों में से सबसे ज्यादा प्रचलन इसी का है यह किसी ग्रंथालय में उपलब्ध संग्रह की खोज में लगने वाले श्रम और समय को न्यूनतम कर देता है। वेब ओपेक एक ऐसी प्रसूची होती है जिसका इंटरनेट के माध्यम से कहीं से भी अभिगम किया जा सकता है। दूसरे शब्दों में कहें तो वेब ओपेक के माध्यम से उपयोक्ता अपने ग्रंथालय के समस्त संग्रहण की सूची घर बैठे देख सकता है। यह वास्तव में किसी ग्रंथालय में उपलब्ध समस्त संग्रहण की सूची होती है। जो कई तरह की सुविधाओं से युक्त होती है। इसके माध्यम की उपयोक्ता किसी ग्रंथ विशेष को अपने नाम पर संरक्षित कर सकता है। अपना प्रोफाइल देख सकता है। पूर्व में लिए गए किसी ग्रन्थ की भी जानकारी मिल सकती है। इसके अतिरिक्त लिए गए ग्रन्थ हेतु अर्थदंड इत्यादि बहुत सारी जानकारियाँ अविलंब घर बैठे मिल जाती है।

ओ. सी. एल. सी. (OCLC)

ओपेक के सबसे पुराने सफल अनुप्रयोगों में से OCLC को गिना जा सकता है। 1967 में ओहियो कॉलेज लाइब्रेरी सेंटर के रूप में शुरु हुयी यह योजना एक कंप्यूटर नेटवर्क और डेटाबेस के माध्यम से ओहियो के पुस्तकालयों के कैटलॉग को इलेक्ट्रॉनिक रूप से संचालित करने, संचालन लागत को नियंत्रित करने और पुस्तकालय प्रबंधन में दक्षता बढ़ाने के लिए थी। इसका उद्देश्य पुस्तकालयों को सहकारी रूप से दुनिया के सूचनाओं पर नजर रखने के लिए शोधकर्ताओं और विद्वानों की सेवा के लिए साथ लाना भी था। OCLC के माध्यम से ऑनलाइन कैटलॉग करने वाली पहली

लाइब्रेरी 26 अगस्त, 1971 को ओहियो यूनिवर्सिटी में एल्डन लाइब्रेरी थी। यह दुनिया भर में किसी भी लाइब्रेरी द्वारा पहली ऑनलाइन कैटलॉगिंग थी। ओसीएलसी और उसके सदस्य पुस्तकालय दुनिया में सबसे बड़े ऑनलाइन पब्लिक एक्सेस कैटलॉग (ओपेक) वर्ल्डकैट का सहयोगात्मक उत्पादन और अनुरक्षण करते हैं।

वर्ल्डकैट (Worldcat)

इसे विश्व का सबसे बड़ा ओपेक कहा जा सकता है। यह लगभग 170 देशों के 72000 अधिक ग्रंथालयों की संघ सूची है जिसमें हम आपने लोकप्रिय पुस्तकों, संगीत सीडी और वीडियो के साथ वे सभी सामग्री जो हम पुस्तकालयों से प्राप्त करते हैं खोज सकते हैं, इसके अलावा यहाँ हम कई नए प्रकार की डिजिटल सामग्री भी खोज सकते हैं, जैसे डाउनलोड करने योग्य ऑडियोबुक। यहाँ हमे उनके पूर्ण पाठ के लिंक के साथ लेख उद्धरण भी मिल सकते हैं। आधिकारिक अनुसंधान सामग्री, जैसे स्थानीय और ऐतिहासिक महत्व के दस्तावेज और तस्वीरेंय और दुर्लभ वस्तुओं के डिजिटल संस्करण जो आम जनता के लिए उपलब्ध नहीं हैं यहाँ आसानी से खोजे जा सकते हैं सबसे बडी बात इसमें कई भाषाओं में संसाधन उपलब्ध हैं।

इंडकैट (IndCat)

भारत के प्रमुख विश्वविद्यालय संस्थान पुस्तकालयों के पुस्तकों, शोध प्रबंधों और धारावाहिकों का एक निःशुल्क ऑनलाइन संघ प्रसूची है इसमें पुस्तकों, शोध प्रबंधों और धारावाहिकों के ग्रन्थात्मक विवरण के साथ साथ उनके स्थान और उपलब्धता की जानकारी होती है यह मानक ग्रंथ सूची प्रारूपों यानी MARC/MARCXML में रिकॉर्ड प्रदान करता है। इसका निर्माण उपयोगकर्ताओं को पास के पुस्तकालयों में उपलब्ध पुस्तकों, धारावाहिकों और शोध प्रबंधों का पता लगाने में मदद करने के उद्देश्य से किया गया है जहां से वे इंटर लाइब्रेरी लोन पर प्रलेखों को उधार ले

113

सकते हैं। इसके अलावा IndCat बिब्लियोग्राफिक जानकारी का एक प्रमुख स्रोत है जिसका उपयोग इंटर–लाइब्रेरी लोन, कलेक्शंस डेवलपमेंट के साथ–साथ कॉपी लिस्ट करने और बिब्लियोग्राफिक रिकॉर्ड के रेट्रो–कनवर्जन के लिए किया जा सकता है।

निष्कर्ष (Conclusion)

किसी भी ग्रंथालय की पहचान सही समय पर संबंधित व्यक्ति को सही सूचना सही ढंग से प्रदान करने की सेवा पर निर्भर करती है। उपयोगिताओं की संतुष्टि ही ग्रंथालय को पहचान दिला पाते हैं। जिसके माध्यम से ग्रंथ वाले के समस्त रूपों का उपयोग संभव हो पाता है। वैचारिक रूप से प्रसूची के कार्य और उद्देश्य इसके भौतिक रूपों और व्यवस्था से स्वतंत्र हैं। हालाँकि, प्रौद्योगिकी ने कार्यों को करने के तरीके को प्रभावित किया। कंप्यूटर और संचार प्रौद्योगिकी ने प्रसूची में अतिरिक्त सुविधाओं को जोड़ दिया है। आज ओपेक के अधिकतम उपयोग को सफल बनाने और ग्रंथालय स्रोतों तक पहुंच में इसकी सशक्त भूमिका, ग्रंथालय का एकमात्र उद्देश्य होना चाहिए।

सन्दर्भ ग्रन्थ सूची (Bibliography)

1. *https://en.wikipedia.org/wiki/Online_public_access_catalog*
2. *http://www.egyankosh.ac.in/bitstream/123456789/60097/1/Unit-5.pdf*
3. *शर्मा (के सी) और हरित (धर्मेन्द्र कुमार) ग्रंथालय एवं सूचीकरण . नई दिल्ली, अटलान्टिक प्रकाशन पृ. 3-20.*
4. *https://www.oclc.org/en/home.html*
5. *https://www.worldcat.org/*
6. *https://indcat.inflibnet.ac.in/*

114