

**DELNET**

***Concerns and Strategies for Digital  
Preservation and Sharing***

***Dr. H. K. Kaul  
Director, DELNET***

[director@delnet.ren.nic.in](mailto:director@delnet.ren.nic.in)

[www.delnet.nic.in](http://www.delnet.nic.in)



## The Growth of Digital Resources

- *The growth and use of full-text digital resources in libraries has been affecting the functioning of resource sharing library networks.*
- *Growth of Information is Random*



# Growing Dimensions

## *Growth is inevitable*

From tangible to intangible media

From Books and Journals to services and databases

The knowledge packages are getting published and distributed on the INTERNET, thus effecting resource sharing networks

From buying to leasing

From ascertaining to using

New purposes of the catalogue.

To help others to use knowledge packages  
on the INTERNET.



## Impact on Library Users

- *Library Users are becoming satisfied with what they get through Google and do not make additional efforts to get the necessary documents through a network or a library.*



## Publishers' Influences

- *Publishers have set up pay-per-view sites and more articles are available through open Access. Most of the Indian users can't afford to buy expensive copies of articles and therefore settle with what they get from Google. This effects the quality of their work, and resource sharing and document delivery programmes.*



## **DELNET Networks**

- ***DELNET is a major resource sharing library network in South Asia with about 7.5 million bibliographic records available online for member libraries. About 1400 libraries from all parts of India and 6 other countries are members of DELNET***



# Networking of Digital Resources

## A Vision

Access any document

In any Language

In any format

Anywhere in the world

Any time as required

At a very low cost

## Networked Digital Resources

### A Vision

Linked to any institution in the world  
Offer digital documents globally



## Digital Resources

*Digital resources with DELNET and those with its member libraries are growing fast. But*

- **They have no archiving facility**
- **Digital technologies used are not uniform**
- **Several vendors are operating**





# Web Resources

The issues that concern DELNET are that the users of member-libraries depend more on Web resources which are haphazard in growth and partly unreliable. Therefore web resources are:

- Not evaluated and selected according to the quality, usefulness, and relevance of information
- Extremely diverse
- Not properly filtered
- Not reviewed by any panels
- Many times dead links exist
- Not regenerated dynamically
- Not retained in any State or National archive



# Development of Digital Collections

**Digital collections vary in standards and quality. They include:**

Digital collections that are created. e.g. newspapers, e-journals, documents in offices, MSS, publications etc

Digital documents converted from print to digital versions

## **Born Digital Publications**

Video Recordings; Sound Recordings; Podcasts; Mixed Media;  
Geographic Information; Software programs; Blogs, Wikis;



## Some Technical Issues

### The issues:

- *Technical sustainability of the software,*
- *Adoption of risk assessment procedures,*
- *Long term archiving; etc.*  
*are not looked into .*



# Accessing Digital Collections

## Accessing Digital Collections

Single search to give access to several related databases is not introduced in most of the libraries

## Accessing Digital Collections in Other Languages

Access should be possible to non-English digital collections with mechanical translations as far as possible. Much to do in this field.



# Digital Library Technologies

## Stanford Digital Libraries Technologies - An Example

Stanford University and Sun Microsystems developed several technologies for developing digital library such as Digital Library Tool Kit, etc. comprise:

InterBib: - a tool for maintaining bibliographic information. Capable of reading from and writing to many different formats, it acts as a unified, searchable repository of bibliographic records.

Archival Repositories: a Digital Library Repository (DLR) is formed by a collection of independent but collaborating sites. Each site manages a collection of digital objects

Digital Wallets: - Focuses on bringing interoperability to the electronic payments arena.”



# Technology Issues

## Online-Catalogues

The catalogues have remained important tools for searching documents. Even today cataloging and authority control have gained more significance in the online environment. In India the creation of authority records is minimal.

## Sharing Technologies

Cooperation with libraries and networks.

Use of knowledge tools.

SalesForce.com, BMC Software, DCASoft, and Atlassian are some of the software used for sharing knowledge.



## Complex Computing Facilities

*Systems that need to use complex computing and mixed topologies and to access multimedia and other full-text databases in order to provide information through one window are very selectively used.*



# Future of Networked Digital Resources

## Provisional paths

In library networking we are expecting systems to get more sophisticated. Mixed topologies such as Bus topology; Ring topology; Star topology; Tree topology may be used to extract relevant information.

## Multimedia

Transient multimedia resources are going to rise out of fixed, permanent and formatted text collections and library networks will have to have the capacity to handle them. Web 2.0 Multimedia Search is likely to provide new opportunities for online advertising and applications.





# Future of Networked Digital Resources

## Relationships

Complex relationships need to be handled by computing models which will revolutionize the networking requirements

## Free, flexible, and virtual information Spaces

Growing access to free, flexible, and virtual information spaces is increasing. How can library networks emulate this model.



# Future of Networked Digital Resources

## Hypertext

Every document needs to get linked, for further explanation or reference, to every other necessary documents through the hypertext. Very large hypertexts and shared information spaces need to emerge. Can the authoring tools which are software and services that are used to produce Web pages advance the use of hypertext in multiple network applications.

## Flexibility

More and more flexibility is getting developed for use in high power computing services. New algorithms avoid large enumeration in programming. How will it effect library resource sharing.

## Contingency

Contingency computing plans to cover risks against attacks, thefts etc have to be made operational.



# Future of Networked Digital Resources

## Multiple online identities

A person can develop multiple identities, where each identity will identify the person with a characteristics or a purpose. A person can have multiple profiles and control access to them. Blogs are the examples. For instance MySpace and Facebook allow people to create a social network helping others to develop different identities/profiles. DELNET is looking into the issue.

## Adaptability and ambiguity

Ambiguities that arise because of speech, language, data etc. are yet another challenge to be faced.



# Future of Networked Digital Resources

## Global

Global vision of the world's computational infrastructure is becoming day by day necessary.

## Informal

Informal knowledge exchange and social relationships among like-minded individuals/ experts is on the increase.



## Internet Resources

- *Most of the member libraries have not begun cataloguing Internet resources. This needs to be **done** and the resources to be shared with other libraries*



## Licensed Content

- *The archiving of licensed content for which the institutions have paid is not done. In some cases there is no clause in the agreement in its favour and with most of libraries no archiving facilities are available*



# Licensing Agreements

## Licensed Content Subscribed Through Vendors

Simplify licensing arrangements

## Harvesting/ Downloaded Web Resources

Several types of harvesters are available for this purpose.  
e.g. E-mail harvester; Fax Harvester



Home / Internet / Utilities / Fax Harvester

### Fax Harvester 1.13

Arkysoft.com FAX Harvester provides the capability to gather business fax numbers from the internet. No need to ever purchase fax number lists again. Broadcast faxing is extremely profitable and now, with Fax Harvester, it is extremely inexpensive. You can gather thousands of targeted fax numbers in minutes. Search by area code or target your audience by keywords. Fax Harvester pays for itself the first time you use it

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Fax enable XP, 2003, Exchange & mail servers. Fax Server - Free d/l  
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- [DVD/AVI/VCD/DivX/Mpeg4](#)

#### Ads by Google

- [Fax Marketing](#)
- [Email Harvester](#)
- [Best Fax Software](#)
- [Email Extractor](#)

#### Search:

 

#### Most Popular:

- [KaZaA Lite Plus](#)
- [LimeWire Accelerator](#)
- [Free Ip Tracer](#)
- [Web Stream Recorder Pro](#)





# The Harvesters

## Open Archives Harvester

The PKP Open Archives Harvester is a free metadata indexing system developed by the Public Knowledge Project through its federally funded efforts to expand and improve access to research.



# The Consortia

## Direct Access or Access Through Consortia

Consortium approach has been tested. Helps to get access to commercially available content at a low price.

**The issues:** Archiving licensed content for which one has paid.

Archiving content for which the permissions are not available.

Access should be possible to content for which payment has been made even after the expiry of subscription.

Pricing should be affordable.



## ArchivalWare, <http://www.ptfs.com>

ArchivalWare™ is a web-based, full-text search and retrieval system for digital libraries. ArchivalWare™ allows organizations to store, access, and manage digital archive collections within one system. Source formats include digital documents, books, news clippings, photographs, video and audio collections and other electronically published material.





## The Metadata

- *The metadata used with most of the digitized data is not upto the mark or is missing. Standards such as Dublin Core Metadata guidelines need to be uniformly adopted.*



# Digitisation

## Metadata

Metadata with a digitized document.

Terminology which is globally comprehensible and standard

Access to content becomes possible through a variety of search engines.

Metadata would generally include author, file name, creation software and version, creation date, modification date, subject, size, and any additional pertinent information. Once the preservation process is done the addition of metadata becomes necessary.

**Dublin Core Metadata Initiative** gives guidelines for creating interoperable online metadata standards.

<http://dublincore.org/documents/dcmi-terms/>

**How to make libraries use standard metadata uniformly?**



## Some Pressing Needs

- **Offer information to the user wherever the user is. We have to change and provide**
  - Value added and reliable information
  - Upgrade technology and offer information through the Web.  
Settle copyright issues
  - Make reasonable but nominal charges to copyright holders.



## SKOS

The management of digital libraries can be effective if the vocabulary used in the metadata and classification of the documents within the library is organized and the retrieval is simple and systematic. The Simple Knowledge Organization System (SKOS) covers precisely the development of a structured vocabulary, and development of a subject index and development of taxonomies within the ambit of the semantic web





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| <b>SKOS Home</b>                                   |
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| <a href="#">RDF Vocabularies</a>                   |
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## Simple Knowledge Organization System (SKOS) - Home Page

SKOS is an area of work developing specifications and standards to support the use of knowledge Organization systems (KOS) such as thesauri, classification schemes, subject heading systems and taxonomies within the framework of the Semantic Web ... [\[read more\]](#)

### Announcements

#### SKOS Reference 2nd Working Draft Published (2008-06-09)

The [Semantic Web Deployment Working Group](#) has published the Second Public Working Draft of the **SKOS Reference**. This new document is the normative specification of the Simple Knowledge Organization System, and is a substantial update to and replacement for the previous [SKOS Reference W3C Working Draft](#) dated 25 January 2008. See [changes](#) from the previous draft. The Working Group solicits review and feedback on this new draft specification. All comments are welcome and may be sent to public-swd-

#### Current specifications...

- **SKOS Reference** (2nd Working Draft, 9 June 2008)
- **SKOS Primer** (1st Working Draft, 21 February 2008)
- **SKOS Use Cases and Requirements** (1st Working Draft, 16 May 2007)
- **Quick Guide to Publishing a Thesaurus on the Semantic Web** (1st Working Draft, 17 May 2005)

**SKOS is developed and maintained the W3C Semantic Web Deployment Working Group (SWD WG).**





## Knowledge Resources

- *DELNET is working towards developing a network of knowledge resources. DELNET needs to introduce standard Digital Library Technologies including tool kits, Digital Wallets etc Interactive networking which covers digital LAN signals, video, television signals, local video, personal computers, television receivers, video cassette recorders, printers, and video cameras have yet to be introduced.*



## Packaging of Knowledge

- *The packaging and delivery of knowledge is going to be a challenging and specialised art. The types of experts who will have to get involved with the work include domain experts, computer experts, training specialists and users who look into all types of documents.*
- *How can cooperation be evolved in this field at the global level?*



## Retrieval Methodologies

- *The semantic retrieval methodologies; retrieval of images either from the Web or from databases by using image and text recognition software; advanced knowledge sharing technologies .*



## Knowledge Delivery

- *Effective Knowledge Delivery Services; etc. will have to be adopted which are user specific !*



# The Human Network

Characteristics

Personal information strategies

Good communication

Enliven your network

Manage technology effectively

Be part of a high performance team

Make teams use technology

Develop a creative knowledge environment



# The Human Network

## Characteristics

Inbuilt human traits are needed in networking of digital resources

*Initiative taking*

*Network with any individual or institution that yield useful information*

*Self-management – manage time for fulfilling commitments*

*Effective team-workers*

*Demonstrate leadership*

*Supportive followers*

*Broad perspective- while initiating or executing jobs*

*Show and tell – ideas are presented persuasively*

*Organisation savvy – work keeping in view the interests and policies of the organisation*



# The Human Network

## Personal information strategies

*Clarifying information*

*The sourcing strategy - Which sources to use*

*Push-Pull strategies*

*Processing information*

*Criteria for Storing*

*Personal Filing*

*Refining the Information*

*Reviewing Information*



# The Human Network

## Good Communication

*Planning*

*Conducive Environment*

*Introduce Yourself First*

*Method of Conveying Information*

*Method of Receiving Information*

*Summarise Action Points*

*Follow Through*





# The Human Network

## Enliven Your Network

*Mapping the Network*

*New Inputs*

*Network Associates*

*Activating the Network*

*Can Network Function Without You?.*

*Reciprocity and Trust*



**Thank You**