

**International Conference on Digital Libraries
(ICDL) 2004**

**Theme: Knowledge creation, preservation, access,
and management**

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Recommendations for a Digital India

Submitted to
Department of Culture
Ministry of Tourism and Culture
Government of India



The Energy and Resources Institute (TERI)
New Delhi

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Recommendations for a Digital India

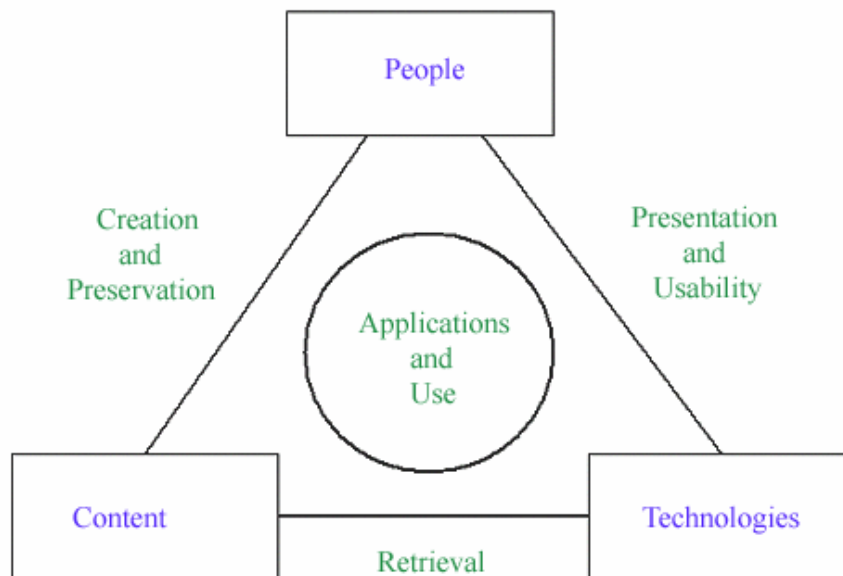
The President of India, in his inaugural speech expressed the opinion that '... we have to make consistent national policies and procedures, which will lead to effective management and control of the data leading to enhancement of national knowledge base ... Policy makers should take into account of the standardization requirements, inter-operability, copyright issues, classification of documents and selection and use of a number of library information systems available with various organizations in the country in different standards.' He further recommended '... deliberation of this issue in the conference and constitution of a multi-disciplinary taskforce for working out the draft policy document for implementation.'

Based on these recommendations, a task force, under the Chairmanship of Prof. N Balakrishnan, was constituted and met during the conference. Several meetings of the task force committee members were held during the conference, but separated from it to consider the action plan needed to be adopted after the conference. These meetings were attended by a host of eminent subject experts in the field of digital libraries, computer science, information sciences etc from Europe, America and Asia. Four sub-groups were constituted during these deliberations to deal with:

- (a) resources;
- (b) technology;
- (c) users; and
- (d) policy and management.

Another sub-group on economics and sustainability will be formed later. The gist of the recommendations made during these meetings were presented by Prof. N Balakrishnan at the valedictory session on 27th February 2004.

The following conceptual framework was a result of a carefully deliberated *EU/DELOS-US/NSF Working Group on Digital Imagery for Significant Cultural and Historical Materials* in 2003, but can be generalized for all types of digital development. This model presents the interrelationship among three key components of any digital library work - “resources”, “technologies” and “people” (“users”), thus should provide a good conceptual base for our deliberation. The complete report can be found at the NSF site as well as <http://www.delosnsf-imaging.unifi.it>.



Source: Chen, Ching-chih et al. *Report of the EU/DELOS-US/NSF Working Group on Digital Imagery for Significant Cultural and Historical Materials, 2003*.

A. Sub-group on Resources

Members: S Majumdar, H K Kaul, S M Dhawan, S Venkadesan, T B Rajashekar, and

Sudha Gopalakrishnan

It was felt that there is no need to create new contents. The focus should be on taking the existing contents to the web; and this must act as a single portal for everything that will personify India's yesterday, today and tomorrow. It will be a window to what India is all about. This can then be linked as integral part to the "global" resources for sharing with citizens of the world.

Some of the resources identified by the group are:

- Culture and Literary Heritage of India (will be showcased)
- Indian History and Science (will be showcased)
- Environment
- Tourism, Folklore and Music (to incorporate both tangible and intangible items)
- Adult Literacy Programmers and Government Publications
- Demography
- Learning Materials
- Medicine (Indian system)

The portal will have contents to touch everyone's needs and ICT for delivery of the contents to everyone.

B. Sub-group on Technology

Members: V Ponraj, Jean-Marc Comment, Usha Mujoo Munshi, and G G Chowdhury

The technology for scanning and standardization of the format for storage and delivery were discussed in detail. Technology for every resources is available e.g. palm leaves, microfiche, manuscripts, etc. Whatever be the resources, they have the technology to take it to the web. Apart from this, technology for Indexing, Security and Delivery aspects were also discussed.

1. **Virtual Reality** models will be created for the development of tourism.
2. **Architecture** should be optimized between local storage and central repository.

Storage costs are coming down, therefore it would be more easily available. Most of the information will be available locally and for the rest outside resources should be resorted to.
3. **Multiple language speech interface** Non-English speaking people (95% Indian) - can communicate through user-friendly interface.
4. **A language independent, human mediated technology neutral solutions.**

Language independent technologies are only in the context of the research domain in the most advanced countries. In India, however, there are quite a number of people who could be human mediaries, for instance, in KIOSKS there would be a Chief Information Officer (CIO) who could act as a human mediator. Thus the language problem becomes tractable.

C. Sub-group on Users

Members: Ching-chih Chen, D C Kar, and Subrata Deb

This group recognizes that the critical issue is providing access to digital archives in appropriate forms for widely different user needs. In order to do this well, various users and stakeholders need to be identified first. They can be classified in many different ways. For example:

General Population Categories:

- School children (kindergarten, primary and secondary)
- College students (undergraduate and graduate)
- Non-student general citizen (ranging from young to old to retired)
 - Physically challenged/impaired
 - Geographically disadvantaged
 - General public

- Retired population
- Citizens of other countries

Educational Categories:

- Illiterate
- K-12 student
- College students (undergraduate and advanced degrees)
- Professionals at non-specialist levels
- Professionals and researchers with specialized trainings and preparations

Professional Categories – This runs the entire gamut of:

- all professional fields, from law to public safety, from art to science, from agriculture to medicine, from history to music, from philosopher to mathematics, etc...
- government policy makers at all levels
- educators of all subject fields and for all age levels, etc.

With this great diversity of user groups, their use of digital resources will run the gamut from curiosity to basic education to research to analysis, from fulfilling coping needs to enrichment of life, and from making a living (such as farmers) to policy making. Appendix IV lists some of the sample digital resources which could be developed to meet the users of a few sample groups. However, it is important to realize that while some types of resources are intended and more suitable for specific groups of users, such as the government records; some others can be of use by almost all types of users without age, educational, professional and geographical limitations, such as the multimedia cultural and heritage image content.

In addition, it is also important to keep in mind many other interrelated concerns related to users and use. The following are just a few examples:

- Users' ability and access to instructional technologies,
- Extension of digital collections online to remote and poor geographic locations,
- Effective use of available metadata on digital content for productive retrieval and use,
- Continuous evaluation and improvements and user feedbacks,
- Scalable deployment to archive, search, and use of very large digital collection.

A sample user groups and likely useful resources are given in the Annex: III.

Every user will have a separate window to look into this Digital Library. Everyone should have access to what is needed by them at any given time.

D. Policy and Management

Members: Michael Seadle, OmVikas, Harsha Parekh

They have looked into the problems of the copyrights lock-in period.

The President has recommended that **Copyrights lock-in period** be reduced to 25 years.

1. **Recommendation for an Online Registry** - Every digital material produced in this country should be registered with the Digital-Object- Identifier (DOI).
2. A **Depository** should be created for our heritage as well. This depository would provide authenticity and ownership as well as will enable preservation of intellectual property rights.

3. **Copy-left Provision** This provision will enable a copyright holder to give up the rights before or after a certain period. Provision for this should be kept open.
4. **Compulsory Licensing** has been well tested for cable TV applications in this country. Compulsory licensing is also recommended for the Digital India
5. **Moral Rights and ethics in the Digital World** It is possible for anyone to manipulate the information and claim the credibility for the work as his/or her. It is, therefore, necessary to make sure that those who deal with digital documents are of elite character with strong ethics.

The group suggested the need for strong articulation so that India can influence the world bodies, whenever India is represented in WIPO, the World convention bodies, etc. India needs to have a digital-policy of her own, so that we don't have to listen to what others say and get dragged into what has been happening elsewhere.

Conclusions

- A fund of rupees 250 crores may be allocated for the next three years for this purpose.
- Digital India will benefit and will be a model for the rest of the world as well.
- We have to set the ball rolling immediately.
- It is possible to take 1.5 Million documents of about 200 pages each or equivalent documents can be taken to the web (for example, music, palm leaves, dance). These could be converted to equivalent number of pages and expenses and can be uploaded.
- Adequate storage facility with moderate connectivity between resource centres and users has been proposed

- It was suggested that provisions should be made to buy out some of the royalty for public good. There should also be some mechanism or model for sharing the royalty.
- Model for the sharing royalty will be based on the usage in other cases. Many people are ready to sell royalties. A central repository should be established to buy out these royalties and disseminate them later on. A mechanism needs to be established for micro payment that can be shared between people. This could be shared by the digital library. The basic idea is not that the digital library is 100% free. Majority of the resources will be free. The rest, however, will be on payment basis. Also, part of it will be donated by the rest of the world.

A National Document can be prepared by collating the feedback from the users.

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During the ICDL **Mr Dhanendra Kumar**, Secretary, Department of Culture, Ministry of Tourism and Culture; **Mr Jayakumar**, Joint Secretary, Department of Culture, Ministry of Tourism and Culture and **Dr R K Pachauri**, DG, TERI suggested immediate formation of a taskforce for preparing the **Recommendations for Digital India**.

ANNEXURE

Annex: I

Information resources planned for the DLI : An Outline

Digital library of India will cover Indian resources with a view to offer access to them under several different windows as follows:

1. Window to cultural and literary heritage of India
 - Language, literature
 - Manuscripts including palm leaf
 - Arts including paintings, sculpture, performing arts, etc pertaining to different sections of society: urban, rural and tribal
 - Temples of India
 - Indian monuments
2. Windows to Indian history
 - Political personalities, statesmen, social reformers, etc
3. Window to Indian science
 - Indian scientists of eminence, India's achievements in science and technology, Indian research institutions
4. Window to environment
 - Flora and fauna of India
 - Biodiversity
5. Window to Indian places of tourism
6. Window to Indian folklore and folktales
7. Window to government publications
 - Women empowerment
 - Dalit empowerment
8. Window to adult literacy
9. Window to Indian demography
 - Voters list
10. Window to resources for the disabled
11. Window to learning
 - Children segment
 - School text books
 - Career literature
 - College text books

12. Window to Indian system of medicine
 - (Already a project- “Traditional Knowledge Digital Library” is in progress at NISCAIR, New Delhi)

Quantum and Financial Implications

The entire process of resource identification and resource generation, and technological solutions for the Digital Library of India envisaged under various windows as mentioned above can be grouped under following components:

1. Collection of Materials, which further can be divided into:
 - a. Contents available for free;
 - b. Content available on payment basis (on cost sharing model or outright royalty payment)

Cost sharing model: Priced publications be put on the portal wherein access to such publications will be priced and earnings so made be shared between the DLI and the copyright holder on 20:80 basis.

2. Content Creation by using the Digitization techniques
3. ICT Infrastructure
4. Overhead including the publicity;

The financial resources can be allocated in the ratio of 70:20:10, wherein 70% of the cost would go to component 1 and 2, 20% to component 3, 10 per cent to component.

We have financial resources to the tune of Rs 250 crores in the current plan period year (to be consumed in three financial year ranging from 2004-05 to 2006-07). Based on the above criteria for allocation, a sum of Rs 175 crore should be available for component 1 and 2. Given Rs 175 crore it is estimated that it will be

possible to put on the DLI portal nearly 1.5 million documents. These documents will be in text, multimedia or a mix of both

Basis: Rs 1000 as the cost for digitization per document covering on an average 200 pages

$(1.5 \text{ million} \times 1000) = \text{Rs } 150 \text{ crore}$

Royalty 10% to 15% = Rs 15 crore

Payments on cost sharing model: Rs 10 crore

Annex:IA

Creation of Cultural Content for National Mission on Digital Libraries

Background

India is the repository of an astounding wealth of intangible heritage with distinctive qualities of its own, which is spread across the sub-continent. Indian civilization has endured thousands of years and has given its inhabitants a sense of cultural stability and identity. It reflects the intermingling of diverse, yet rich cultural streams through a process of assimilation that has today given it its special pluralistic character. Few countries in the world have a cultural tradition, culture and variety as diverse as that of India. India's physical, religious, racial and linguistic variety is reflected in its heritage.

The expressions of India's heritage take a multiplicity of forms like fairs and festivals, worship and ritual, as well as games, play, arts and crafts. Underneath the diversity of India's heritage lies the continuity of Indian civilization from the earliest times to the present day. Dating its origins to the oral tradition of the Vedas and the great epics of India, there are countless expressions of intangible heritage expressed in its mythology, folklore, worship patterns, festivals, fairs and the arts. Indian arts span various traditions, from folk and classical, ancient, medieval and modern, urban and rural, tribal, erotic, abstract, functional, sacred and secular, which overlap each other, making meaning only when they are understood as part of a comprehensive order of life. With about eight hundred dialects and more than fifteen officially recognized languages, several religions, various styles of art, architecture, literature, music and

dance, and several lifestyle patterns, India represents the largest democracy with a seamless picture of unity in diversity unparalleled anywhere else in the world.

There is an astounding variety of expressions of art and culture in India dating back from early period which defy strict classification. However, the manifest forms of such expressions relate to areas such as

- oral traditions
- folklore and mythology
- knowledge relating to nature
- ecology and medicine
- lifestyle patterns
- worship patterns
- social practices and festive events
- performing arts

and such other aspects dealing with culture. These include such disciplines as

- Architecture
- Sculpture
- Literature
- Painting
- Dance
- Music
- Rituals
- Traditional medicine
- Disciplines of science

among others, recorded in materials such as

- manuscripts (palm leaf, birch bark, paper, leather)

- stone
- terracotta
- wood
- metal
- cloth
- paper
- film, audio/video
- photography

and a host of others, and illustrative of science, art, crafts, religion and many more (in the tangible form) and as customs, beliefs, myths, rituals, knowledge systems perpetuated as oral expressions (in the intangible form).

The making of an inventory to document aspects of culture and heritage makes information relating to such areas of knowledge accessible to the public at large, and helps in documentation and preservation of this knowledge for posterity.

Synergy with Other Missions by the Department of Culture

The idea of establishing database and knowledge digital library through a proposed National Mission on Digital Libraries coalesce with the other Missions initiated by the Department of Culture. The mission is to create a portal for the Digital Library of India which will foster creativity and free access to all human knowledge.

Traditionally, libraries have served the great social purpose by offering services to visitors. Once the available resources are in digital form, they can be properly indexed which could serve in fast search and access. Similarly, the rare artifacts under any collection, is accessible (more precisely viewable) only during exhibitions. A digital

image may not give the right ambience of a real object, but can at-least serve the user to get the right details.

The proposed National Mission for Digital Libraries would be synergized with other Missions being started by the Department of Culture, especially the National Mission for Intangible Cultural Heritage (ICH) which seeks to take urgent action for safeguarding of the intangible cultural heritage for India. The starting of the Mission was through an announcement made by Shri Atal Behari Vajpayee, the Prime Minister of India, on 15 August 2003. The Mission seeks to draw together all the institutional and individual efforts on the protection and revitalisation of the intangible heritage of India, through a well -defined policy to increase awareness about the importance of intangible cultural heritage as a component of national culture. People of each cultural domain require being encouraged in sustaining their "parampara". The success of such a process of revitalisation depends largely on proper planning and careful execution of the desired plan through well trained personnel in the respective field who can convince the people of a particular culture adequately about the necessity and urgency of perpetuation of their unique wisdom, traditional knowledge and other expressions of intangible cultural heritage. A major task of the Mission is to make exhaustive inventory of all aspects of cultural heritage. This will involve the creation of a national database on cultural heritage through networking with national and local institutions, NGOs, private sector, individuals, etc. The creation of registries of items of such heritage will be operationalised through the creation of national, state level and local committees.

The more diversified the heritage, the more challenging it becomes to classify and document them through gathering them into basic categories, and sub-categories. The making of such a comprehensive database is a national effort, which needs

strategies, capacities and efforts of multiple niche -areas through wide networking with institutions both in the public and the private domains.

For the creation of the Digital Library focusing on culture, the following points may be relevant:

- Awareness- raising about the value of digital documentation
- adopting an agree code for digital documentation of cultural resources
- coordinating management of cultural resources at local, regional and national levels
- developing standards and applications for digitization of culture
- developing local language technologies
- fostering training in conservation, digitization and dissemination
- enabling IPR development

Budget

Digital documentation of culture assets would require vast resources and strategies, including mobilization of public awareness through education, creative application of Information Technology, developing standards and application software, use of appropriate technology, media, research and documentation. All this would need multi-pronged operation strategies, requiring reconfigurations of overall approaches. Clearly appropriate institutional and financial mechanisms are necessary for the facilitation of the programme.

Annex: II

Sub committee on technologies: towards the digital library initiatives in India

Objective

To delve upon the various technological issues related to digitization like hardware, software, languages etc.,

Major Areas

1. Technologies

	Resources	Technologies	
1.	Explicit knowledge resources: Books, materials, journals, Literature	<ul style="list-style-type: none">▪ Scan and convert in the formats: TIFF, JPEG, Gif, PDF, RTF, HTML, TXT, XML formats etc.,	Scanning and Indexing <ul style="list-style-type: none">▪ Scanning, processing software▪ Indexing and cataloguing through open source based powerful search engines for meta data indexing in multiple languages▪ OCR Software for all regional official languages in India
2.	Manuscript, Palm Leaves, Cultural and Traditional heritages and Traditional	<ul style="list-style-type: none">▪ Not only scanning, but also recording the translations by the experts	Security <ul style="list-style-type: none">▪ Encryption and decryption and PKI infrastructure for secured access▪ Digital signatures for

	Medicines etc.,	in video and audio: MPEG, AVI, AU, WAU	authentication basically for the Government records <ul style="list-style-type: none"> ▪ Language independent operating systems, Web Servers, Database servers, Application servers and messaging servers initiatives for research and development with open source and national interfaces
3.	Rare Film archives of national importance in political, history, culture, civilizational heritage and music	<ul style="list-style-type: none"> ▪ Converting from the Beta format/Film format/audio format etc., into DVD format 	Delivery <ul style="list-style-type: none"> ▪ Noise reduction audio recording software ▪ Text to speech conversion software ▪ Real-time video recording software ▪ Streaming and multicasting software ▪ General-purpose players for playing video and audio clippings and web based players
4.	Virtual reality models built on the ruined archeological	<ul style="list-style-type: none"> ▪ Creating VRML Models 	Interoperability <ul style="list-style-type: none"> ▪ Interoperability to be ensured through XML and web services based implementation of Digital

excavations and sites to present to the present and future generations

library services for transacting library objects with international standards across different digital library communities.

Digital Library

- Comprehensive Digital Library software to host central and federated databases for portal
- Digital Library software framework should be capable of adopting any type of future input, which is interoperable and scalable software to accommodate the future requirements.
- Restricted/Open access framework
 - local vs global, free VS Fee-based access, learner centric access VS content based access with printing enabled/disabled options with digital security and encryption
- User centric Data warehousing and data mining framework for the digital library

Knowledge management

- Knowledge management system software to generate and capability to map the explicit knowledge and implicit knowledge - generate, retention and reuse and capture the tacit knowledge in multi-dimensional forms
- Central Knowledge management Server should have a central indexing server having a knowledge robot to collect the meta data information from distributed digital library servers
- Collaborative knowledge forums

Standards

- File formats - scan, record and created files
- Meta data formats - tags, different language meta data
- Delivery formats - both file and meta data (For ex: CD Distribution)

- | | | |
|--|--|---|
| | | <ul style="list-style-type: none">▪ Interoperable standards - Based on xml/Web services |
|--|--|---|

2. **Architecture and Infrastructure**

The Architecture and the infrastructure of the national Digital Library infrastructure to be detailed:

- a. National Digital Library Data Center with High end Consolidated/Clustered Servers with scalable, redundant, reliable, interoperable and long term preservation features.
- b. Knowledge Management Grid connecting all the participating digital libraries in a Master/Slave mode connected using the high bandwidth broadband network - Knowledge discovery and knowledge capture, knowledge dissemination
- c. Network connectivity through broadband, VSAT, Wireless and internet
- d. Networked inter active CD Server based JUKE BOX
- e. Storage requirement may be met through SAN storage for Block I/O Operations and NAS for the File I/O Operations etc.
- f. Disaster recovery facility setup with mirroring and replication facility setup
- g. Automated backup facility
- h. In addition to this infrastructure, the delivery mechanism could also be through interactive CD ROMs on different domains/resources

Multiple language Speech interface driven through hand-held access devices and kiosks

Annex III

User Group

Objective

Identify users and useful resources

Sample User Groups and Likely Useful Resources

Users	Useful Resources
<ul style="list-style-type: none">▪ School children (Primary and secondary) ▪ College students ▪ Educators	Text Books Books, journals, reports, reference materials, etc ...
<ul style="list-style-type: none">▪ Students ▪ Teachers ▪ Geographically disadvantaged people ▪ Distance learners	Tutorial Packages/Digital Gurus/Tele-education
<ul style="list-style-type: none">▪ Policy makers ▪ Legal and political science researchers ▪ Lawyers & Judges ▪ Police departments ▪ General Public	Govt Entity & files <ul style="list-style-type: none">▪ Ministry records ▪ Municipality/Corporation records Police records

<ul style="list-style-type: none"> ▪ Psychologists 	<p>Statistical documents</p>
<ul style="list-style-type: none"> ▪ Archaeologists ▪ Architects ▪ Artisans ▪ Historians ▪ Museologists ▪ Scriptologists ▪ Tourists ▪ Researchers and students ▪ Preservation and conservation specialists ▪ Future generations ▪ Ancient Science Specialists ▪ General public and world citizens 	<p>Archives & Manuscripts</p> <p>Museum Artifacts</p> <p>Cultural and heritage materials</p> <p>Multimedia images of artifacts</p> <p>Archeological sites</p>
<ul style="list-style-type: none"> ▪ Tourists ▪ General public ▪ World citizens 	<p>Maps and guides about cities, towns, sites, museums, etc.</p> <p>Transportation information</p> <p>Tourist information</p>

Annex: IV

Policy Group

Copyright Mandate from President of India

6. Modification to copyright Act: The Copyright Act was evolved when the rate of generation of new books and journals was low and it prescribed the protection period as fifty years in India. Similar are the time limits in other countries. In this millenium when the rate of flow of new books/journals has increased substantially, there is a need to have a re-look at the lock - in period of copyright documents. This International Conference could initiate action for reducing the copyright duration substantially. Dr. A. P. J. Abdul Kalam, President of India. Available at <http://www.presidentofindia.nic.in> (February 2004)

INTRODUCTION

India needs practical, affordable, and immediate access to scholarly and research information in order to bridge the digital divide that separate rich and poor countries, and the rich and the poor within countries. The quantity of all forms of information, scholarly as well as commercial, is increasing rapidly. Existing copyright laws within member countries of the Berne Convention lock that information for the life of the author plus a number of years (60 in India), and make no distinction between the information type and intent. They are monolithic, one-size-fits-all solutions tailored more to protect commercial than consumer interests. Some consumer rights in the

form of "fair use" "fair dealing" exist, but fail to provide a safe and reliable haven for projects aimed at the open exchange of knowledge.

The President's mandate is to reexamine this lock-in period to make information more universally accessible. The following recommendations work within the framework of the Berne Convention. They aim to protect the interest of the owners of commercial works while freeing other forms of intellectual property for open exchange and discourse.

None of the proposals below are unique. They are drawn from the copyright debates in many countries. India has an opportunity to take a leadership position among the countries of the world by acting on one or more of them.

DURATION REDUCTION

India could recommend to the Berne Convention that it mandate a radical reduction in the protection period for scholarly and research materials. The choice of whether a work is scholarly and research materials. The choice of whether a work is scholarly or commercial could be left to the rights holder, with a registration requirement for longer protection that would enable consumers to find easily whether a work had protection.

ONLINE REGISTRY AND CLEARANCE

Merely finding rights holders represents a major barrier to getting a permission to use works. India could require that copyright holders be required to maintain a current address at a central national or international registry, and that consumers who wish to make copies of works whose owners are not registered would receive automatic

temporary clearance that would hold them harmless from lawsuit. Ownership changes would need to be cross-referenced.

COPYLEFT PROVISION

The principle of "copyleft" is that the rights holder should have the right to choose not to continue copyright protection in a standard, legally binding, and recently registered way. While this can be done via a public contract, a more secure and systematic approach would be a provision in the law to establish a legally binding central registry where copyright protected works go irrevocably into the public domain at a time of the right holder's choosing. An optional end to copyright protection after 5 or even 10 years would free a large amount of academic scholarship without affecting the rights of commercially valuable works. India could implement copyright in its own laws.

AUTOMATIC LICENSE

An automatic or mechanical license is used in many countries for particular types of work, music, for example, in the United States. Such licensing does not end protection for a copyrighted work, but enables its widespread use through predictable, low cost-per-use charges. A variety of collecting mechanisms are used today, either via government organisations or collecting societies that represent groups of rights holders. While such fees are often set by legislation, a wider range of market-based choices could also be implemented, preferably using a scale that take local costs and incomes into account. Automatic licensing would open decades worth of past works to safe and affordable public use. India could implement automatic licensing for scholarly and research materials at home, and could recommend automatic licensing for scholarly and research materials to the Berne Convention.

MORAL RIGHTS

While long periods of protection for economic exploitation rights create problems for the free exchange of information and access to knowledge, enduring protection for moral right should be maintained. These include the right of attribution, and the right to prevent changes or defacement that would alter the nature and intent of the work. India should review the provision of moral right in the current copyright act, and to strengthen them wherever necessary. It could also recommend this to the Berne convention.

TRANSLATIONS

Translations are derivative works that require permission from the original right holder. For multilingual searching and multilingual societies, translation is an important enabling tool and should provide automatic licensing for translations within India. India could also recommend to Berne that non-commercial translation involving minimal human effort or creativity is exempt from copyright protection.

DEPOSITORY REQUIREMENT

While compulsory deposit for paper materials is well established, digital depository requirements exist in only a few countries and are not systematically enforced. India require registration and deposit for any materials, digital or analog, that get long term copyright protection. This would : a) ensure that materials would be available to national libraries ; b) assist in establishing the authenticity of copies by comparison with a trusted repository ; c) could provide information about the ownership of a work, and d) would assist National Library India in attempting to preserve intellectual

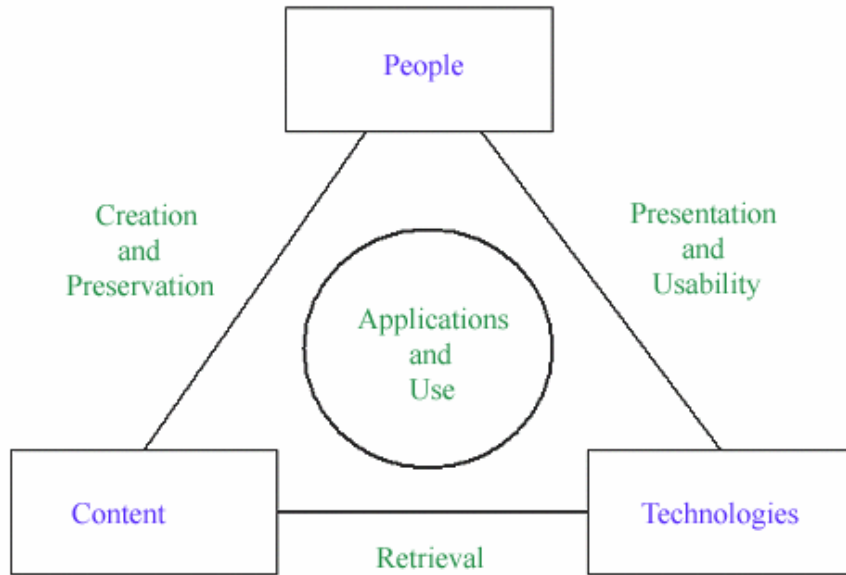
property for future generations by freeing them at least from the burden of finding copies.

CONCLUSION

The President of India called for a reduction in the duration of copyright protection as part of a plan to provide universal access to the kinds of scholarly and research materials that a free and intellectually active society needs to be able to compete successfully in modern economies. The International Conference on Digital Libraries believes that these proposals work the market constraints and market economies of contemporary society and recommends their consideration.

Annex V:**COMMENTS AND SUGGESTIONS**

For Group	Comments and suggestions	By	Remarks
Sub-group on Technology	Looking at the Model, it would be good some comments be given re “retrieval” techniques for the resources, and also re “presentation and usability” by the “users”.	Dr Ching-chih Chen	Not incorporated, to be decided by the group
Changes included			
For Group	Comments and suggestions	By	
All	<p>A. The following conceptual framework was a result of a carefully deliberated <i>EU/DELOS-US/NSF Working Group on Digital Imagery for Significant Cultural and Historical Materials</i> in 2003, but can be generalized for all types of digital development I would suggest that we use a modified graphic for the Digital India proposal in the opening statement on p.5.</p> <p>This model ties the “resources” “technologies” and “users” nicely together and provide a base for our deliberation. The complete report can be found at the NSF site as well as http://www.delosnsf-imaging.unifi.it.</p>	Dr Ching-chih Chen	



Source: Chen, Ching-chih et al. *Report of the EU/DELOS-US/NSF Working Group on Digital Imagery for Significant Cultural and Historical Materials, 2003*.

<p>All</p>	<p>B. Recommendations for... “These meetings were attended by a host of eminent subject experts in the <u>field of digitization</u>,” Should be something like: “These meetings were attended by a host of eminent subject experts in the fields of digital libraries, computer science, information sciences etc...” [comment: “digitization” is an activity, and not a “field”.]</p>	<p>Dr Ching-chih Chen</p>
<p>Sub-group on Resources</p>	<p>C. p. 5, opening paragraph of the Sub-group on Resources It was felt that there is no need to create new contents. The focus should be on taking the existing contents to the web; and this must act as a single portal for everything that will personify India’s yesterday, today and tomorrow. It will be a window to what India is all about. This can then be linked as integral part to the “global” resources for sharing with citizens of the world. [I suggest that this sentence be added for the “global”...]</p>	<p>Dr Ching-chih Chen</p>

