Preface

Over the last two decades, a great deal of literature has been published to support digitisation projects. Guidelines for digital imaging and standard introductory texts on digitisation like Anne Kenney and Oya Rieger’s *Moving Theory into Practice* and Stuart Lee’s *Digital Imaging: A Practical Handbook* are of a similar age, although still extremely useful. More up-to-date guidance is also available from services like JISC Digital Media and the Federal Agencies Digitization Guidelines Initiative.

Continuing the efforts in this direction, *Design, Development, and Management of Resources for Digital Library Services* aims to add to the existing literature covering the disparate aspects of digitization and its management. The main focus of the book is on building and managing resources and records, meaning that it would seem to be most useful for those working in the library and archives sectors. The book brings together an eminent group of contributors and attempts to provide some essential context, linking digitization initiatives to the ongoing collection management practices of libraries.

Though written by various authors, the book makes a coherent whole, and every chapter has its particular role and place in it. The book opens by briefly examining the concepts, issues, and problems that are pertinent to the topic of digitization and that have been developing over the last decades. These chapters are written by professional librarians and researchers who know their job and base their texts on considerable practice.

The chapters contain a series of descriptive examples that put the readers in the digital library. It is particularly useful in that its uncomplicated approach will put readers at ease while at the same time preparing the ground for a discussion of concepts, theories, and methods.

The authors argue that the digital library has brought revolution to modern library management and information delivery to users resulting in a shift in attention from development and preservation to development and use. In practice, however, the link between the roles can be more nuanced. For example, in some cases digitization may benefit conservation aims by helping to reduce the physical handling of fragile materials. In general, however, the authors feel that while the long-term sustainability challenges of digital content remain unresolved, digitization of any book or document cannot be seen as a preservation measure for the original itself.

Consisting of 30 chapters, the book elaborates upon various aspects, like design and development, preservation of digital information, digital library evaluation, digital library education, trends in metadata harvesting, institutional repositories, information seeking behavior, information literacy in a digital context, digital rights management, etc. Theoretical and historical formulations are backed by actual implementation processes in the form of case studies.

Anne R. Diekema, in her chapter, “Design and Development Considerations for a Multilingual Digital Library,” states that the most challenging feature of the multilingual digital library is the crossing of
the language barrier, which is achieved through translation, often introducing errors in the process. She presents a general introduction to the challenges facing developers of multilingual digital libraries and provides references for further reading.

In his chapter, “Integration of Digital Reference Service for Scholarly Communication in the Digital Libraries,” Vilas G. Jadhav says that the digital libraries are a key connector to the information resources that are necessary for the growth of research. The ability to disseminate and promote one’s work and research is an important component of managing and communicating information. Digital libraries and the Web have brought enormously powerful search mechanisms to the desktops of many researchers.

Taking up the cause of digital preservation, Shivani Kaushal and Sakshi Bahl, in their chapter “Digital Preservation: Principles and Policies,” argue that scholars in the various disciplines who are concerned about the tendency towards the fragmentation of knowledge and the increasing complexity of the data have sought a unifying approach to knowledge. Notwithstanding the different strategies that will be necessary for different categories of digital objects at different stages in their lifespan, several principles have been identified that underpin all strategies. All of these generalizations are interdependent, no one principle is more important than any other principle. Individual principles should not be considered in isolation. Thus, the emphases are on the generalizations of preserving the data in all the formats, which elaborates the concepts that are relevant to preserve the data and illustrates the knowledge of digital objects and their analyses.

In the same vein, Baldev Kumar and Dr. Ramchander, in their chapter “Preservation of Digital Information in Library and Information Centres,” focus on digital preservation, strategies, policies, functions, current activities, and guideline of digital preservation of information.

Offering a fresh insight, Eduardo da Silva Alentejo, in his valuable contribution “Perspectives of Digital Library Evaluation: Methodology from Marketing of Services for Information Services,” states that the virtual health library can be visualized as a distributed base of scientific and technical health knowledge that is saved, organized, and stored in electronic format in the countries of South America and the Caribbean Region, universally accessible on the Internet and compatible with international databases and standards. The theme quality management of Virtual Health Library (VHL) presents an evaluation methodology from marketing of services identified as “quality information system.”

In their interesting and important contribution, “Towards Arab Digital Libraries: Opportunities, Challenges, and Requirements,” Mohammed Nasser Al-Suqri, Khalsa Abdullah Al-Hinai, and Kawther Mohammed Al-Hashmi draw on existing literature to highlight the potential opportunities that digital libraries offer to the countries of the Arab world, and to examine the challenges inherent in their development and how these might best be overcome. They conclude that libraries in many Arab countries are still hindered by a severe lack of resources, trained and experienced staff, and adequate infrastructure, and these problems could severely undermine attempts to move towards digitization of libraries. It is the role of the governments of these countries, along with commercial organizations, information professionals, academic specialists, and other groups to acknowledge the benefits and opportunities offered by digital libraries and work together to make them a reality in the Arab world.

Nadim Akhtar Khan and Mohammad Farooq Batoo, in their interesting contribution “Stone Inscriptions of Srinagar: Digital Panorama,” have identified historical monuments in Srinagar with a rich inscription collection. These inscriptions constitute an important addition to the corpus of known historical texts from different historical time periods. The study analyzes their content and attempts to provide associated metadata and related information about each identified inscription by collecting data either through
reading the inscriptions, discussions and consultations with concierge and local people, or by consulting other secondary sources pertaining to such inscriptions.

The chapter by Jyoti Gupta deals with “Digital Library Initiatives in India” and describes how a databank of digital cultural heritage from libraries, archives, and museums has been established with online service for national and worldwide users. She highlights some of the features of digital libraries in an Indian context.

Naresh Kumar, in his chapter titled “Digital Library Education: India and Abroad,” talks about the meaning of the digital library and takes us through the various features of the digital libraries. A brief overview of digital library education via online education and formal education is given in this chapter. The chapter provides a list of Indian universities that conduct PG Diploma in digital library with their duration, admission, eligibility, etc. Some foreign universities are also discussed. The whole chapter revolves round digital library education. A list of projects carried out on digital libraries around the globe is provided.

P. S. Rajput, in his chapter “Digital Library: An Emerging Paradigm towards Open Access,” writes that the perception of library is undergoing a drastic alteration due to the impact of information communication technologies. Gone are the days when libraries had only printed collections. The emerging technologies have compelled libraries to digitize information. The advent of Internet has radically changed the form of library classification and cataloging. This chapter defines digital library and shows the complete process for creating a well-designed digital library. It highlights the challenges encountered in the process of creating and developing a digital library. It also discusses major and minor issues that need to be given serious thought in the process of digitization of libraries.

Continuing the theme, Nilesh A. Shewale, Preedip Balaji B., and Dr. Madhukar Shewale in their contribution, “Open Content: An Inference for Developing an Open Information Field,” state that the rapidly growing open content movement has intense outcomes and teaching approaches for the emergent social learning. Open content is any kind of creative work, or content, published under a license that explicitly allows copying and modifying of its information by anyone; on the other hand, a closed system follows a completely proprietary approach. This chapter discusses open vs. closed systems, open content development process and model, challenges in content decision, the 4Rs in open content, and tools. The authors highlight some of the instances where open content has proved beneficial for education, organizations, and the users in building an open knowledge society.

Dr. Sumeer Gul and Tariq Ahmad Shah, in their chapter “A Lost Dimension in the Open Scholarly World: Authors’ Experiences and Open Access Publishing,” find out that the movement of free accessibility of scholarly literature on the public Web has brought an uprising in the intellectual class of the digital world. Although several studies have been carried out to understand the end-users’ awareness level and the benefits they avail from this revolution, the researchers/authors who play a pivotal role and without whom Open Access (OA) would not exist have remained unstudied, if not unnoticed. Regardless the use of OA platforms, earlier research has to some extent indicated the experiences, behavior, and attitudes of authors towards open access. The way they think about OA has been explored by authorities from various dimensions.

Nadim Akhtar Khan, in his chapter “Emerging Trends in OAI-PMH Application,” describes how OAI-PMH provides an application-independent interoperability framework based on metadata harvesting. It is an effective way of sharing metadata between gateway services. This chapter makes an assessment to trace the growth in the use of Open Archive Initiative-Protocol for Metadata Harvesting (OAI-PMH)
by open access repositories. The study has been carried out by consulting the database of Directory of Open Access Repositories – OpenDOAR. The study observed growth in the use and application of OAI-PMH protocol by OA repositories. Increase in the number of OAI-PMH complaint repositories provides an ample justification for its distinction among varied protocols to be utilized for resource sharing in a knowledge society. However, developing and underdeveloped nations need to be made aware of the benefits of utilizing the harvesting capabilities of this protocol. The chapter provides an opportunity to understand the astounding growing trends in the use of the protocol.

In next chapter, “The Concept of Metadata for Digital Information Resources with Special Reference to Dublin Core (DC),” Sunil Tyagi defines the metadata, their types, creation, and some of the important functions. He outlines the basic elements of the Dublin Core metadata standard and mentions other metadata standards.

K. Nazeer Badhusha, in his contribution, “Significance of Metadata,” states that metadata is structured data that describes the characteristics of a resource. It shares many similar characteristics to the cataloguing that takes place in libraries, museums, and archives. The term “meta” derives from the Greek word denoting a nature of a higher order or more fundamental kind. A metadata record consists of a number of pre-defined elements representing specific attributes of a resource, and each element can have one or more values.

Ajay Pratap Singh and Pooja Shukla, in their chapter, “Strategies and Issues of Institutional Repositories: An Indian Scenario,” state that IRs have emerged as a very essential mode of accessing and sharing information. Institutional repositories are digital collections of the outputs created within a university or research institution. The chapter explores the trends at the global and national level of institutional repositories and discusses some important software, which is being used by institutional repositories of various organizations worldwide.

Shalini Wasan and Rupak Chakravarty, in their chapter, “Digital Repositories as Harbingers of Open Access in India: A Study,” assert that Open Access (OA) is a noble cause, as it removes all hurdles from free access to scholarly works and promotes knowledge sharing. The OA movement is strengthened by Institutional Repositories (IRs). IRs are based on institute-specific requirements, workflow pattern, metadata, and other related standards for different kinds of digital documents, search and retrieval requirements, and user interfaces at various levels. In India, some elite educational and research institutes, such as Indian Statistical Institute, some CSIR Laboratories, IITs, and IIMs, have taken significant initiatives in building IRs.

Munawaroh, in next chapter, “Building Repository Banking and Finance (ReBaF): A Case Study in Library of STIE Perbanas Surabaya,” describes that Banking and Finance (ReBaf) is one of the digital library services developed by STIE Perbanas Surabaya in an effort to extend the collection of banking and financial data organized by the Library of STIE Perbanas Surabaya. The ReBafSISFO (information system) applies open-source software with PHP SQL programming language and a PostgreSQL database.

Maria Vee Kwon, in her contribution, “Strategic Approach to 24/7 Services: Best Practices for ‘Gateway to Nyack Hospital Medical Library Resources’ in a Digital Era,” provides a strategic approach and firsthand insight into the best practices for Nyack Hospital’s User Community “Gateway to NH Medical Library Resources” Virtual Library 24/7 service. In an effort to maximize Library and Information Services (LIS) while minimizing the department’s planned budget and licensing fees, the author shares current practices of the knowledge-based information needs of the Hospital:

In the next chapter, “Empowering LIS Professionals and Academic Library Users in Networked and Digital Environments: A Case Study of Rabindra Library, Assam University, Silchar,” Manoj Kumar
Sinha presents a case study of the Rabindra Library, Assam University, Silchar, and gives an overview of the modernization of academic libraries in the ICT era and the changing format of the library resources and types of computer-based services being offered by the academic libraries. Sinha highlights the need for empowering LIS professionals working in academic libraries and their end users in the electronic/digital era, enumerates the role of various agencies that are engaged in making library users aware of the usage of the printed as well as e-resources, and explains the role of Web 2.0/Library 2.0 in making library users more interactive and well informed about the resources, products, and services of the academic libraries to their clientele. The third part of the chapter discusses the User Education Program/User Awareness Program being organized and offered to students and research scholars by the Assam University Library (Rabindra Library, Silchar) as a case study. Some suggestions and recommendations conclude the chapter.

Dakshayani A. and Srinivasan S., in their chapter, “Information Seeking Behavior of Users and Strategies to Overcome the Challenges in the Current Era,” states that due to the continuous research and development activities taking place in almost all the disciplines, information overload and information explosion has occurred, which has in turn posed a challenge to the user community to keep track of knowledge in their discipline. The dynamic nature of information has forced users to change their way of seeking information. Hence, there is an immediate need for the information professionals to update the services and facilities of the library. He/she should act as an ultimate search engine and satisfy the information needs of the users. This chapter highlights the changing approach to information by the user community and also provides solutions to information professionals to tackle the information expectations of the users. This chapter has been written based on the observation of library users and the way they seek information for their business requirements and research and development activities.

Kaushal Chauhan and Rabindra Kumar Mahapatra, in their chapter, “Information Seeking Behavior in Digital Environments and Libraries in Enhancing the Use of Digital Information,” state that current exploitation of multimedia technology is changing our understanding of the interconnections of graphics, sound, and images, and the types of information they present. Thus, we need to understand both the human psyche and available technologies in order to create and to interpret new expressions. The chapter highlights the benefits of digital information and how libraries are helpful in enhancing the use of digital information. The chapter describes how libraries can provide Internet access, electronic contents, and training to users. It explains the changing and changed attitude of information professionals.

In the next chapter, Ramneek Singh and Amrit Kaur discuss “Information Needs and Information Seeking Behavior of Physically Challenged Students and Faculty of the University of Delhi: A Study.” Information seeking is described as a fluid and situation-dependent activity where a seeker’s actions are influenced by access to information, perceived quality, and trust in the information source. The situation is more intense if the information seeker is a physically disabled person. This demands a call for a regular study and development of an information system and management of information services for persons with disabilities. The University of Delhi has more than 1200 students and teachers with disabilities in its various colleges and departments. Very little is known about the techniques employed by them when looking for information, what kinds of source formats they prefer to use and how these sources are used, what barriers they confront, how they feel about the process, and how they can be helped to better exploit the information resources available to them. The chapter attempts to investigate and find the answers to the above questions by using survey methods of research.

Subhajit Choudhury, Prof. S. Kumar, and Chitresh Kala, in their chapter, “Information Literacy: A Tool for Empowerment of the People of India, Nepal, and Bangladesh,” state that the root cause of
digital divide in countries like India, Nepal, and Bangladesh is information illiteracy. The data collected on various e-initiatives in India, Nepal, and Bangladesh is discussed. Information literacy depends on various factors, and it should start at the national level; therefore, after taking due consideration of socio-economic, geographic, and political factors, information literacy plans are formulated for these countries. They suggest that the government should set up a national level apex body, such as the Indian Information Literacy Forum, Nepal Information Literacy Programme, Bangladesh Information Literacy Programme, or an Autonomous Information Literacy Council under the Ministry of Information Technology and in collaboration with the Ministry of Human Resource Development and Ministry of Telecommunication in India, Ministry of Information and Communication in Nepal, and Ministry of Science and Information and Communication Technology in Bangladesh. It also suggests various other measures to create IL programs to transform these countries into developed nations.

The next chapter, Kanchan Kamila’s “Impact of ICT on the Changing Roles of the Librarian, Other Library and Information Science (LIS) Professionals and Managerial Change,” describes how fast-paced change in technology, particularly the origin of ICT and social, political, and economical change, forced managerial change in Libraries and Information Centres (LICs). In this context, managerial change towards structure, technology, task, people, library policies, objectives and functions of information system, and process of managerial change in LICs are discussed, and the chapter concludes that “Change Management” is the only feasible solution to overcome all the difficulties and problems created in this ever-changing environment for the overall development and progress of LICs in the ICT era.

Shampa Paul and Shashi P. Singh, in their chapter, “ICTs in Libraries: Prospects and Challenges,” describe how recent developments in Information and Communication Technologies (ICT) have characterized new ways of information generation, management, and dissemination. The advancements in ICTs with breakthroughs in transient and permanent information storage technologies have not only reduced the cost of infrastructure required for hosting digital libraries, but also demonstrated the success of a wide variety of projects across the world. Their chapter tries to address and document the emergence of digital technologies and the purpose and characteristics of digital libraries and digitization policy. It also elaborates the process of digitization, including the hardware and software requirements, focusing on major digitization initiatives and the challenges of digitization.

Discussing role of information networks, K. N. Kandpal, Faheem Khan Mohammad, and S. S. Rawat, in their chapter, “BTISNet: Biotechnology Information Network for the Biological Scientific Community,” describe how bioinformatics plays an important role in speeding up research in the field of biotechnology related to plant as well as animal science. A bioinformatics program under BTISNet has been catering to the information needs of ten-twelve-thousand scientific personnel. An Apex Centre at the Dept. of Biotechnology, New Delhi, along with fifty-six centers and thirty-one Bioinformatics Infrastructure Facility Centres (BIFs) are engaged in this task to serve researchers, scientists, students, etc.

Samta Tapkir and S. Kumar, in their contribution, “E-Books: Reader, Librarian, and Publisher Perspectives” state that the e-book is a digital medium for communication of information and discuss various issues, such as the technology required, standardization, licensing, pricing, etc. The chapter also discusses the need for a legal deposit of e-books and the problems facing this issue, and the authors use a Legal Deposit Database (LDD) to solve it. The advantages and disadvantages of e-books and the barriers affecting their use are also discussed. An analysis of the survey is presented, which shows the views of readers, librarians, and publishers about e-books. The analysis reveals that libraries should purchase e-books because of online availability, 24x7 easy access, simultaneous use, etc. The chapter concludes with the problems of e-books in India, such as multiple languages used in the country, and visualizes
a glorious future with the adoption of technology by users, the minimization of DRM restrictions, and the use of an open access model.

Digital rights management has emerged as one of the important and contentious issues with which scholars and practitioners have been grappling without much consensus. Manju Dubey and Mangala Hirwade, in the last chapter of book, “Copyright Relevancy at Stake in Libraries of the Digital Era,” dwell upon the matter and state that the purpose behind the copyright is to make ideas available for human progress and not to lock them up. With the advent of new services, new products, and new obligations of the creators, intermediaries, and the users, it is essential for libraries to align and interpret copyright in the new landscape so as to encourage creators, assist intermediaries, and support readers, and if by some or other reason the power swings into the hands of intermediaries, the copyright regime will face a battle for its survival and relevancy in libraries.

This publication is intended as an introductory text for those acquainting themselves with the issues of digital resources and their management. Being broad and aimed at bringing a wide range of interesting problems and facts, the book cannot go deeply into detailed explorations of the presented problems, but it may be a very good starting point for those who would like to do so.

On the whole, this is a well-written and perceptively analytical reference book that should be received with open arms by schools of library and information studies and researchers looking for an analytical synthesis of digital resource management.

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