

Editorial

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There are several challenges we come across in our endeavour to provide effective access to and use of scientific data and information in the developing world. These are over and above the difficulties associated with the information and communication technology (ICT) infrastructure. Although these challenges are serious, they can be overcome through sustained focus and joint action. In particular, there are numerous examples of proven and successful approaches that can usefully be adopted to solve most, if not all, of the recognized problems. For instance, different developed and developing countries have established a variety of novel and effective mechanisms to reduce barriers and promote the production, access, and use of digital scientific information. Models such as open-source software, federated open data networks, open-access journals, and collaborative websites are becoming increasingly accepted and useful tools for the advancement of public research and education. One particularly important mechanism – managing open institutional repositories – is the focus of this document. Digitally networked open institutional repositories for scholarly literature – for articles from refereed journals, as well as the grey literature and other research output – are coming to be recognized as a fundamental component of the scientific and educational systems, and of the broader knowledge society, in many countries.

It greatly enhances and facilitates scientific inquiry, diversity of analysis and opinion, new types of research, and methods of analysis, and generally prevents duplicative work and research inefficiencies generally. It eliminates, to a large extent, economic barriers on the transfer of information to researchers and students who are unable to afford high (or any) access cost. Overall, the different forms of online open access promote interdisciplinary and international research, particularly in integrating scientists in the less economically developed countries into the global research system. It truly democratizes access to information and tends to provide a level playing field for innovation.

The experts in the field of information sciences attempt to address some of these challenges in this issue. Abrizah, in her paper, gives a complete overview of her pilot study conducted at a research-intensive university. She focuses on the strategies to populate the IR, motivating the researchers to self-archive papers, capture pre-existing collection of theses and dissertations, and build the institutional repository.

Zierau and Kejser explore the usage of the Open Archival Information Systems (OAIS) reference model to provide the framework for systematically analyzing an institution's technical and organizational requirement for a remote bit repository. The study further finds

that the institutions have varying requirements, for example, for safety, accessibility, and confidentiality of enormous resources.

The Nobel Laureate Rabindranath Tagore's Rabindra Sangeet, published in *Geetanjali*, is among the most famous of Indian literary creations. Misra, Bhattacharya, and Basu have given a brief description of the new framework and a simple application for archiving Tagore's songs in MIDI.

Altenhoner's paper highlights the latest developments in the German National Library (Deutsche Nationalbibliothek, DNB), which was initiated in the 1990s. Mishra and Ghosh present, in their paper, a novel approach to visualize and navigate through the document collection of a DL using ontology. They present an abstract view of the knowledge map in a clear and concise manner.

While Smith, in his research paper, opts for an experimental approach of collaborative open access institutional repository digital collection building and digital preservation strategy for Diatomscales, which is a small representative sample image of biological silica, Jan and Khan present a detailed study of Google Scholar's credibility and harvesting capability by submitting select titles from the field of microbiology in three major, renowned, and open access journal lists.

We do hope that the readers would benefit from the scholarly articles presented in this issue and compare with their own experiences in facing the challenges in the world of digital information.