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IDL framework to integrate disparate digital library systems: a case study

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Abstract

Purpose – The main purpose of this article is to provide a focal framework with the aim of making integrated digital libraries in technical and content level of syntactic interoperability between digital libraries.

Design/methodology/approach – Literature review, library research method and analytical approach were used in the first step of this research in order to design IDL framework. Then a survey of 11 Iranian digital library applications was conducted for testing the proposed framework. Finally, based on the findings, conceptual integration architecture was proposed based on the framework.

Findings – Based on the literature a framework for integration of digital library applications in syntax level is proposed which includes four core layers: models, protocols, metadata formats, and context-based layer. Based on the findings of the survey, integration architecture is proposed which includes all the mentioned layers in the IDL framework. So as to decrease cost of installing the architecture, cloud base technology architecture introduced to be used inverse.

Originality/value – A gap exists between research and practice in the field of integrated digital libraries. In fact this article is an attempt to cover this gap by proposing a framework that can be implemented.

Keywords Digital libraries, Communication technologies, Document delivery, Electronic data interchange

Paper type Research paper

1. Introduction

Web technologies have changed user's information seeking behaviour (Nkomo, 2009; Bhatia and Venkata Rao, 2011). One of the most prevalent of these technologies is the provision of integrated access to distributed information on the web (Stenmark and Jadaan, 2006). Because users have gotten used to one-stop-shopping services similar to what they use on the web even where quality information services are concerned, libraries have had to move toward integrated search services. Therefore, the integration of disparate collections and managing interoperability are among the main challenges of information service providers (Shiri, 2003). Libraries are in danger of losing their users, if not enough attention is paid to the provision of integrated access to information resources. There have been many attempts by libraries to offer integrated access to information resources, e.g. British Library integrated catalogue (British Library, 2011), Copac (Copac National, 2011), OCLC World Cat (World Cat, 2011). In the past, integration was limited to union catalogues and that caused big challenges due to technological limitations. Nowadays, integration is not limited to catalogues and includes all levels of digital information services, from metadata to full-text information services. Integration is now becoming one of the main issues for digital libraries.

