

A Proposed Usage-Centered Model for a Web Based Application: Digital Library

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Abstract—The growth of information technology has necessitated its application in seemingly traditional fields of human endeavours. Libraries being one of them, a digital library is a library in which collections are stored in digital formats (as opposed to print, microform, or other media) and accessible by computers. The digital content may be stored locally, or accessed remotely via computer networks.

Digital libraries have hitherto been built around complex frameworks and models that are costly to build.

This paper presents a flexible, model driven approach for a web based digital library using the Use Case Modelling concept for the system design. This approach focuses on user interface and usability. Its simple, model driven techniques work well for novel applications and integrate readily with agile software development.

A conceptual model is used to show the relationship between classes of the system. The use case model significantly reduces the complexity involved in building a system; this in turn, translates to a reduction in the overhead cost incurred in system analysis and design.

Keywords—Academic Repositories, Conceptual Model, Information Retrieval, Modelling, Usage-Centered Design.

II. RELATED WORK

Many large, well funded institutions have now embarked on extensive projects to produce Digital Libraries (DLs) [2]. They have shown a considerable degree of success in producing digitized collections of resources, using advanced internet technologies to produce integrated libraries from geographically spread and widely heterogeneous sources. The National Library of Portugal (BN) as a patrimonial Library presented special motivation to pursue goals related to new technical area especially as regards digital publishing and this has been pursued in building up valuable expertise in the conception of an actual model for the national digital library [4]. The Metropolitan New York Library Council (Metro) built a directory of digital collections which was created and maintained by libraries in the metropolitan New York City area using Omeka [5]. The Digital Research Group developed a prototype digital library system called Ariadne in 1994 which was used as a framework for