Beyond open source: a technology assessment of open standards and validation tools in the era of Cloud computing and a SaaS case study Panagiotis Stathopoulos, Nikos Houssos, Prodomos Tsiavos, and George Stavrou, National Documentation Centre; National Hellenic Research Foundation, Greece

Abstract

A significant factor for the development of grey literature delivery systems was open source software and open standards capabilities and availability. Open source software powers a significant number of grey literature systems implementations, including repositories, digital libraries, etc., while the definition and provisioning of open interoperability standards allows the delivery of value added services. Open source and open standards have achieved at enabling the provision of grey literature infrastructure and technology to a wide community of professionals and the public, thus achieving a high level of interoperability and technological platforms costs reduction. However, a paradigm shift is under way, in the way content and grey literature content in particular, can be organized, aggregated and delivered. Additionally to the open source systems increasingly discussions are made for utilizing the Cloud capabilities, where under the uniform term Cloud, various technologies, business and service models are aggregated. In this paper a technology survey and assessment of the current state of the art for providing Cloud based services for Digital Repositories, Digital Preservations and repository interoperability, is made. Solutions that integrate Cloud based technologies and elements, or entirely Cloud based solutions are expected to increase in the forthcoming years. The various Cloud technology service models (Infrastructure as a Service, Platform as a Service, Software Service) and the capabilities they offer for the implementation of repositories, digital preservation and interoperability systems, are examined. In the full paper the opportunities, challenges and requirements posed by this paradigm shift are examined, especially from the point of view of Grey literature oriented Repositories and systems. The increased significance of open standards, in the light of migration among different Cloud providers, the neutrality of Cloud operators are especially targeted. Furthermore, as a specific case study, the efforts made by the National Documentation Center of Greece for providing a Repository with the Software as a Service Cloud model and an online Open Standards Validation system are presented. The Repository as a Service system builds upon previous einfrastructures of the National Documentation center, and is provided for Greek public institutions as a SaaS based tool for organizing and delivering grey literature content, in a viable manner. In the area of interoperability the provisioning of a centrally managed Interoperability Validation tool, for validating conformance to a set of existing international open standards is presented. This validation tool is going to be used for validating interoperability features by a series of Greek digital culture projects, which can include grey literature material. This validation tool provides the necessary framework for ensuring, actively the interoperation of the various digital repositories projects, whether Cloud or standalone based, to aggregator services and for providing additional value added services.

Digital Preservation at INIS, International Nuclear Information System Dobrica Savic and Germain St-Pierre, Nuclear Information Section, International Atomic Energy Agency, Austria

Abstract

Since its creation in 1970 until 1996, the International Nuclear Information System (INIS) collected and converted to microfiche over 312 000 non-conventional literature (NCL) reports received from IAEA member states and international organizations. The microfiche collection contains over 1 million items, with an estimated total of 25 million pages of full-texts. In 1997, the INIS Secretariat replaced the microfiche-based production system with an imaging system to process and to disseminate all NCL documents in electronic format. That marked the beginning of digital preservation efforts that still continue today. This paper provides an overview of the digital preservation practices and the technical infrastructure of the International Nuclear Information System (INIS). It describes the technical processes, the standards in place, the hardware and software used, as well as all practices related to scanning, quality control, OCR, preservation and storage.

Effect of Open API, NDSL Open Service (NOS) on Sharing Technical Reports in Korea Seon-Hee Lee and Hyun-Mi Hwan, Korea Institute of Science and Technology Information, KISTI, Korea

Abstract

This paper is a case study on sharing technical reports through Open Application Programming Interface (API) in Korea. Korea Institute of Science and Technology Information (KISTI) has been collecting the technical reports of national research and development projects through National Science & Technology Information System (NTIS). KISTI has shared the users with the technical reports through a portal system so called National Discovery for Science Leaders (NDSL). In 2009, KISTI implemented an Open API so called NDSL Open Service (NOS) to increase sharing the national R&D research results among users through major portals, institutes, and universities in Korea. The NOS participants can access the technical reports from their website directly instead of being on the NDSL platform. Usage of technical reports has increased dramatically since the implementation of NOS. This study is to analyze the effect of NOS on the usage of national R&D technical reports by examining the changes of usage amount and the number of participating organizations in NOS. The operating mechanism of NOS was mentioned in order to introduce its design and the populating system of technical report repository. The numbers of universities, institutes and portals using NOS and the usage statistics of technical reports through NOS were examined from 2009 to 2012. The statistics were obtained from the NOS usage monitoring system. The usage statistics of technical reports through NDSL and NOS were compared. The numbers of participating organizations in NOS has increased by 19 times from 5 in 2009 to 93 in 2012. The participants include universities, research institutes, and major portals such as Seoul National University, Korea Advanced Institute of Science and Technology, NAVER, etc. The usage amount of technical reports through the Open API, NOS has increased by about 100% since its implementation compared to the previous usages by NDSL portal alone. The usage of technical reports in search, detailed content views, and full-text views are increased through NOS. National R&D technical reports funded by Korean government are being shared among users through various portals, universities, research institutes, and companies through NOS. The usage of the technical reports has increase dramatically since NOS implementation in 2009, which has contributed to populating grey literature repositories in Korea. Through NOS, the Korean R&D research results as national knowledge asset can be utilized by wide users for creating new studies and avoiding duplication of research.

Grey literature and development of agricultural research in Cameroon Valère Djidere, Dschang University Library, Cameroon

Abstract

The Faculty of Agronomy and Agricultural Sciences of the University of Dschang in Cameroon is the most important institution in the Central Africa which is involved in rural development issue since 1960. It activities concerned particularly: training agricultural engineer, implementing agricultural research and supporting social development. For over fifty years, scientific research that has been done in this faculty generated an important number of grey literatures such as: dissertations, theses, scientific articles, abstracts... These documents represent a considerable mass of scientific and technical information that plays a very vital role in the scientific community to disseminate the results of research, serve as supports for other scientific work and bring solutions to the problems of society. However, these studies are not sufficiently known by the public which they are intended worldwide. The objective of this work was to explore the barriers that make difficult the dissemination of this scientific production in the context of granting them a dimension that transcends the subjective part of graduation and grade change. To achieve this, we firstly used the qualitative method based on observation, survey of some officials involved in the process of research and documentation. On the other hand, we used the theory of "two step flow of communication" and the theory of "diffusion of innovation". These theories were important for our analysis and also provided a scientific base, which allowed us to have the following results: opinion leaders who should be the relays for imparting the message is not enough

involved in the communication of the results of research ; there is also a resistance to the integration of new technologies as a prerequisite for better management of scientific production, and the absence of real scientific communication standards and policy that can bring the whole mass of this grey literature available to potential users.

Collecting Grey Literature from Africa: a case study on the African Section Pamphlet Collection at the Library of Congress Mattye Laverne Page, Library of Congress, African and Middle Eastern Division, USA

Abstract

This case study describes the development of a sizeable collection of grey literature, the African Section Pamphlet Collection, at the Library of Congress. Over decades, the African Section has been the focal point for collecting materials at the Library of Congress which are from Africa and about Africa. Since it was established in 1960, the African Section has amassed thousands of pieces of grey literature. For early acquisitions, this can be attributed to the Library's strict collecting policies. In 1966, the Library of Congress Field Office in Nairobi, Kenya was founded and an increasing amount of ephemera entered the Library from Eastern Africa. For years, these items were stored in cardboard boxes in work stations, before moving onto open shelving in plastic boxes and then eventually into more appropriate archival holders. The collection was highly visible. Patrons had full access. Managed by a technician and lacking any bibliographic control, patron and librarian alike were often surprised at the treasures to be found there. Organizational and political changes in Africa contributed to a surge of activity with the African Section Pamphlet Collection in the 1980s. This case study describes the accomplishments over a 50 year period beginning with collection level cataloging in the mid-1980s for the LC Online Catalog which introduced the collections to patrons from afar. Prior to that, it was only known through research at LC and bibliographies that scholars and researchers had access to this material.. The present collection is extensive, physically much less accessible and in need of more bibliographic access. The formats that comprise the African Section Pamphlet Collection are: posters, sample serials, African languages materials, university catalogs, a country collection housed in over 600 archival boxes, political ephemera and artifacts, a Portuguese colonial collection, and a tangible media collection. Only a small amount of this material has benefitted from preservation and conservation services, principally while preparing items for exhibit, or when re-housing curated items with custom fitted protective enclosures. Due to a recent Library inventory, a tangible media collection of approximately 150 items surfaced. Some small grey literature collections with permissions have been digitized and are available on line. Copyright concerns have prevented microfilming and stalled digitizing the collection, although discussion continues. The current achievable goal for this collection is accessibility through the development of on-line finding aids. Since the collection is so massive, work is completed in increments by Africa region.