DIGITAL LIBRARY SOFTWARE

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Abstract:

"*The demand for packages for digital libraries is rising. It is recommended to use open source software while building a digital library on a tight budget. Digital libraries (DLs) can be created using a variety of open source software tools that can be used by both people and companies. However, evaluating various DL software suites is not simple. The purpose of this essay is to examine and assess the advantages, characteristics, and costs of open source applications like D Space, Greenstone Digital Library, and E Prints.*"

Keywords:

Open Source Software; Digital Library; D Space; Greenstone (GSDL); E Prints; Digital libraries; Computer software

INTRODUCTION

The introduction of library administration software marks the beginning of library automation. To fully automate the library into computer systems, the software package must have the best features. The use of information and communication technology to replace manual labor in libraries is referred to as "library automation" in a broad sense. The automatic acquisition of spatial units, cataloging, circulation, maintaining serials, and offering reference services are the library's main duties. Open source library management software has recently attracted the attention of librarians, despite the fact that there are currently a number of commercial library software options in use. Digital libraries (DLs) offer search, retrieval, and other information services via computer networks and other electronic media in addition to facilitating the production, upkeep, and management of multimedia digital content. Because of developments in DL technologies, which have also fundamentally changed how people access and interact with knowledge, the idea of libraries has been greatly expanded

DIGITAL LIBRARY SOFTWARE PACKAGES

Software must be used to construct and maintain digital libraries. Digital library software is now available to the vast majority of people. However, because they are so expensive, most libraries are unable to buy them. The costs for installation, yearly maintenance, and/or upgrade may be high for some proprietary software systems. Using open source software for digital library applications could help overcome this problem. The development and sharing of information via digital library collections is now an enticing and practical proposition for library and information professionals anywhere in the globe, in large part because of the recent release of various open source digital library software packages. It is advised to use open source software when creating a digital library on a small budget. In this article, D Space, Greenstone, and E Prints—three popular free source digital library applications—are compared and contrasted.

1 DSPACE

To unite the innovative output of several Research and Development companies, HP (Hewlett-Packard) and MIT (Massachusetts Institute of Technology) created the D Space project. D Space can help large institutions with the establishment, maintenance, and digital preservation of institutional repositories. Workflow and customization are possible with D Space. For content that is based on a community or collection, it accepts contributions from a variety of user communities.

2 GREENSTONE

Use this application to create and distribute digital library collections. The Human Info NGO, UNESCO, and the University of Waikato's New Zealand Digital Library Project provided funding for its creation and accessibility. This open source application, which supports papers in many different languages, is governed by the GNU General Public License.

A tool named Greenstone is used to develop and share digital library collections. It offers a distinctive method for gathering information and disseminating it through the internet or via CD-ROM. In collaboration with the Human Info NGO, UNESCO, and the University of Waikato's New Zealand Digital Library Project, Greenstone was developed and published. Open-source, multilingual software is distributed under the terms of the GNU General Public License. The Greenstone program aims to give people the tools they need to create their own digital library, especially at academic institutions, libraries, and other public service organizations. Particularly in developing nations, digital libraries are fundamentally altering how knowledge is obtained and disseminated in partner communities and institutions for education, science, and culture. With the use of this software, digital libraries may successfully disseminate content and make it available to a wider audience. The first steps in creating a digital library are converting printed book pages, photos, or other materials into the necessary digital formats and integrating multiple digital formats into one to be used in the library. This chapter's key themes are optical character recognition coders, Adobe Acrobat, and scanning software. We'll also go through how to convert printed books and other computer-readable materials into electronic books.

THE GREENSTONE LIBRARIAN INTERFACE

Through the "Librarian" interface, Greenstone users build and maintain their digital library collections. This is done to make the creation and management of digital information collections simpler for librarians and other people who produce electronic anthologies. If the documents and data are already in electronic form, the user can rapidly establish a collection using a template and start the construction process. The collection's full-text indexes, browsing tools, and text compression can take some time to develop. Megabytes of text and millions of documents can be found in some libraries. You can access even more information through a collection, which commonly blends written content with audio, visual, and video content. The mechanical collection-building process can take anything from a few seconds for a tiny collection to many hours for a multi-Gbyte collection with numerous full-text indexes, depending on the size of the collection. Through the Librarian interface, it is utilized to keep track of everything and offers accurate progress indications. Due to their complexity and distinctive features, large collections frequently require more time to set up. The design and debugging phases may take days or even weeks if iterative usability testing is required. The dictum "simple things should be simple, complex things should be possible" [6] is one with which the Greenstone designers completely concur. Both the user interface and the services that Greenstone provides can be customized by library users. The file types that will be used (HTML, Word, PDF, PostScript, PowerPoint, Excel), the types of metadata that will be accessible (MARC records, OAI archives, Pro Cite, BibTex or Refer files, CDS/ISIS databases), and the searchable indexes that will be provided (full text, possibly divided by language or other features, and selected met) can all be specified by librarians, even those who need to quickly create new collections. Advanced users can modify each page that Greenstone provides by changing how items are displayed on the screen. The interface created for the librarian can be used to manage all of these functions. Greenstone has a variety of different capabilities in addition to the Librarian interface. The user interface can be translated into a variety of natural languages. They can integrate Greenstone widgets, such as the full-text search engine or browsers, into their own Web pages if they are proficient with HTML. If they are familiar with JavaScript, they can incorporate browsing features like image maps, and if they are familiar with Perl, they can add totally new features like Chinese stroke-based or Pinyin-based browsing. The Greenstone "receptionist" application, developed in C++, can be altered at runtime to include additional functionality in order to better suit changing requirements.

3 E-PRINTS

The most significant, well-known, and widely used digital library software was developed at the University of Southampton. There is very little technical knowledge needed. Any institution on earth can install the application. The software may be tailored to match regional needs thanks to its integrated smart search, enhanced metadata, and other features.

FEATURES OF SOFTWARE IN DIGITAL LIBRARY

Source software has a few distinguishing features. The following is a list of the benefits of open source software

- **Source Code:** The OSS contains source code and allows distribution in both compiled and uncompelled forms.

- **No Discrimination against Fields of Endeavour:** anyone is prohibited from using the program for a certain purpose despite the authorization. It won't prevent the program from being used, for example, for heredity research or in a corporation.

- **Derived Works**: Nearly all licenses permit the distribution of altered and derivative works so long as they follow the same guidelines as the license of the original application..

- **Is not specific to a Product**: The rights added to the program are separate from its overall share of the distribution of such programme. If the program is utilized or distributed in accordance with the conditions of the program's license, all parties to whom the program is redistributed have the same rights as those that are permitted with regard to the initial programming conveyance.

- **Not Restrict Other Software:** The permit doesn't put confinements on other programming that is circulated alongside the authorized programming. For instance, the permit doesn't demand that every other program disseminated on a similar medium must be open-source programming.

- **Technology-Neutral:** Most of OSS is technology-neutral

IMPORTANT OCR SOFTWARE

ABBYY Fine Reader

A tool for more effective handling of PDF files is ABBYY® Fine Reader® 15. Thanks to ABBYY's AI-based OCR engine, Fine Reader makes it simpler to digitize, convert, retrieve, edit, protect, share, and collaborate on a variety of different sorts of documents in the digital office. It also integrates scanned paper into computerized processes**.**

Able2Extract Professional

Acrobat Reader DC

Able2Extract Professional 15 is an expensive OCR-enabled PDF editor and converter. The original and scanned versions of the Excel, Word, PowerPoint, Publisher, AutoCAD, Open Office, and Publisher formats can all be converted into fully editable PDF files. Additionally, it can split and merge PDF pages, edit PDF text and images, add digital and electronic signatures, create globally compatible PDFs from more than 300 formats, process many PDF files at once in batch mode, and do a number of other activities. available on Windows, Mac, and Linux. Best for Cloud-based pdf document management solution that enables businesses of all sizes view, sign, comment, edit, export and share documents with annotations and online storage.

Readiris

Readiris is the name of the most recent version of this robust OCR software. Included are a new recognition engine, a new user interface, and speedier document handling. You can easily convert into a variety of formats, including audio files, thanks to its vocal recognition. Readiris is one of the greatest OCR

tools with a simpler learning curve. You get what you pay for even though the program is paid for. Readiris has additional alluring features that facilitate conversion and supports the majority of file types. For instance, you can gather photos from connected devices like scanners and alter processing parameters like the DPI using the application. After processing, Readiris recognizes the text zones or sections and gives you the option of extracting text from either the entire file or just a specific zone. Using Readiris, the recovered text can be kept in a number of cloud storage systems, such as Google Drive, One Drive, Dropbox, and others. One of the many text processing and editing features it offers is the capacity to read barcodes. The cost of the subscription, which includes a 10-day trial period, is $99 overall. Microsoft OneNote is a note-taking application with OCR capabilities. Using the "Copy text from picture" option, you can extract text from images. OneNote stands out for how user-friendly it is; all you have to do is add the image, right-click it, and choose "Copy text from picture," and it takes care of the rest. You can copy and paste the texts into Microsoft Word or any other program of your choice because they are saved to a clipboard.

Simple OCR

With Simple OCR, you can quickly convert your hard-copy printouts into editable text files. If you have a lot of handwritten documents and want to convert them into editable text files, simple OCR would be your best alternative. Handwriting extraction is restricted and is only offered as a 14-day trial. With machine printing, there is no cost and no restriction. The updated text can be checked for problems using the built-in spellchecker. Additionally, the software can be set up to read directly from a scanner. Similar to Microsoft OneNote, simple OCR does not support tables or columns.

Components of a Digital Library

Digital libraries are slightly different in content and organization. As a result, it is not possible to give a complete list of all the elements that may be found in a digital library. However , there are basic elements which any digital library should contain. These include the following:

Name: A digital library should have a unique name

Site logo: A logo is a printed symbol designed for and used by an organization or company as its special sign. A logo is an essential element that identifies a digital library.

Links: A digital library contains links to other websites and resources. The library contain databases of resources listed at a library and links to external databases and resources.

Subject Guides: A digital library contains documents which may be full text, list of meeting, conferences and exhibitions, etc. Documents: A digital library contains documents which may be full text, list of meeting, conferences and exhibitions, etc. An e-mail front-end that allows users to initiate interlibrary loan and document. Delivery requests suggest purchases or ask reference question from within the OPAC

Mailing lists: A mailing list is a group of users with a shared interest whose e-mail addresses are collected together in electronic list that can be used to send e-mail to each member of the list (Greenlaw and Hepp, 2000).

Newsgroup: A newsgroup is a discussion group, in which computer users throughout the world participate

CONCLUSION

In recent years, the Open Archives Initiative has gained increased notoriety. Anyone can easily create their own library collections because to the open source software's simple user interface. The comparison and evaluation showed that some essential elements listed in the literature are still missing from open source DL software. However, D space and Greenstone were able to meet the majority of the crucial KPIs among the three due to their considerable support for end-user functionality. The forthcoming edition of E Prints might be successful if it offers a feature for monitoring and reporting usage. Due to inconsistent support in a variety of areas, especially in the search category, E Prints did poorly in the evaluation. It's important to realize that each software solution has unique advantages and disadvantages that will appeal to various stakeholders and organizations with various needs.

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