

A Digital Contents Integrated Viewer System using Multi-DRM Authentication Technique¹

Chan-Sung Jung So¹, Seong-Jin Kim², Kwang-Man Ko²

¹Wonkwang University, 460 Iksandae-ro, Iksan, Jeonbuk, 570-749, South Korea
csjung@wonkwang.ac.kr

²Sangji University, School of Computer and Information, 83 Sangjidae-gil, Wonju-si,
Gwangwon-do 220-702, South Korea
{seogjin.kim, kkman}@sangji.ac.kr

Abstract. The CMS (Contents Management System) were used to efficiently manage variable contents as system software on the websites. It this paper intends to overcome tightly-closed DRM (Digital Right Managements) which depend on commercial industries and to minimize the inconvenience of the library user and managers through the integrated contents management system. For this goal, we proposed and implemented the integrated CMS and the integrated viewer system using multi-DRM authentication methods.

Keywords: contents management system, DRM, e-book viewer

1 Introduction

The market of the e-book and the digital contents are fast increased and effected by the wireless communication environments and expansion of the smartphone and tablet PC. Many people expect to expand and develop of the market volume and user's demand according to speedy supply and vitalization. The CMS were used to efficiently manage variable contents as system software on the websites.

The e-book and digital content DRM were closed and limited to a specific publication company because of the e-book manufacture and circulation company's profits. For this status, a library manager and e-book user continuously address to inconveniences and demand on the integrated CMS with search engine and viewer which independent on a specific commercial right. In this paper, we constructed and developed the integrated CMS based on the XE and FBeader[1] open-sources to minimize inconveniences of e-book user and library managers. And we demonstrated the building system and an integrated viewer which is free to a specific e-book publication companies.

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2.2 Circular Sequential Search Mechanism

The previous commercial CMS had a specific database which districted to a manufacturing company. So we designed a new mechanism, circular sequential method, to search several separated database. Through this approaches, CMS users search the special keywords such as author, title, and publication, regardless of the specific database. From this works as shown on Fig. 3., we supplied the fast and comfortable search mechanism to e-book search user and the library manager operated the integrated search panel which reduced the unnecessary time and exertions.

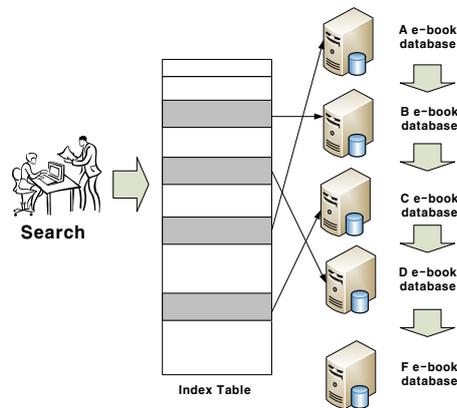


Fig. 3. Circular sequential search mechanism for an integrated CMS search

3 An Integrated Viewing System

3.1 Overall System Structure

In this paper, we developed the integrated e-book viewer based on FBreader e-book open-source as following Fig. 4., Firstly, the integrated viewer reads ePUB format files and an digital contents with personal DRM. In this procedures, we verified the satisfied viewing works and DMR authentication. And then, we applied this viewer to commercial e-book contents such as e-kyobo, and yse24. But the commercial and publication company DRM authentication routine needed to political decision and permissions.

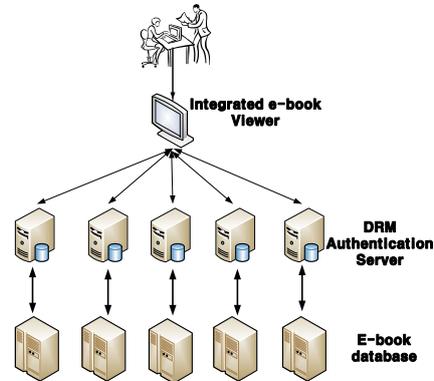


Fig. 4. An Integrated e-book Viewer System with Multi-DRM Authentication

3.2 Test and Verification Works

Specifically, we distributed and employed this integrated CMS system and integrated viewer with multi-DRM authentication on the practical library server conjunction with a virtual database server.

4 Conclusions

In this paper, we proposed and implemented the integrated CMS and the integrated viewer system using multi-DRM authentication methods. In the future works, we'll develop the android app which view e-book contents with same functions for the mobile user.

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