

A Content Management Method by Integrating Distributed Content Servers

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Creating digital records, classifying them in particular purposes and storing them are techniques often used in many sites that research cultural properties. Numerous systems have been proposed to keep massive contents, and various types of content servers are being used to run digital archives and digital museums in many sites. Moreover, many museums have exhibition guide systems to display their collections with the digital records. These content servers and exhibition guide systems require expertise of managing them, while research of cultural properties requires expertise of the properties themselves. Most sites lack enough experts for both of them. Moreover, there are many types of cultural properties. These diverse items need different designs of content servers and ways to use contents, but sometimes content servers are not well designed. As a result, a site must run content servers for each dataset, such as database servers, file servers, and web servers. Content servers that are inappropriately managed prevent efficient use of contents in different servers or hamper cooperation among them. In such case, it is difficult to make applications that use the contents in the servers.

This paper describes an implementation of a peer-to-peer based content management system that integrates contents distributed in two or more content servers. Our proposed system has a mechanism of controlling content servers and creating content control data for managing contents. The proposed system manages the content servers and the contents with these data over a peer-to-peer network. With this management method, the system provides scalable and efficient use of the contents by integrating the servers and the contents. The system also provides mobile devices with functions to access the contents servers. These functions enable exhibition guide systems which work on mobile devices to use integrated content servers easily and efficiently.