Chapter 1.19
Mix, Match, Rediscovery:
A Mashup Experiment of Knowledge Organization in an Enterprise Environment

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ABSTRACT

Knowledge is the fact or knowing something from experience or via association. Knowledge organization is the systematic management and organization of knowledge (Hodge, 2000). With the advent of Web 2.0, Mashups have become a hot new thing on the Web. A mashup is a Web site or a Web application that combines content from more than one source and delivers it in an integrated way (Fichter, 2006). In this article, we will first explore the concept of mashups and look at the components of a mashup. We will provide an overview of various mashups on the Internet. We will look at literature about knowledge and the knowledge organization. Then, we will elaborate on our experiment of a mashup in an enterprise environment. We will describe how we mixed the content from two sets of sources and created a new source: a novel way of organizing and dis-playing HP Labs Technical Reports. The findings from our project will be included and some best practices for creating enterprise mashups will be given. The future of enterprise mashups will be discussed as well.

INTRODUCTION

Knowledge is knowing facts, information, or knowing how to do something from experience or via association. Knowledge organization is the systematic management and organization of knowledge (Hodge, 2000). The new technology of mashup can be used to organize, harvest, share, and leverage knowledge.

With the endless development of new technologies, more and more information—in a wide variety of formats—continues to become increasingly available on the Web, making it one of the

most information-rich infrastructures ever built. With the advent of Web 2.0, mashups, which are combinations of content from different sources, have become a hot topic on the Web, gaining increasing popularity. According to Programmableweb.com (http://www.programmableweb.com/), there are currently 3.09 unique mashups being created each day, as programmers, Web developers, and hobbyists continue to blend data and services from different sources to produce entirely unique sets of content.

What is a Mashup?

A mashup is a Web site or a Web application that combines content from more than one source to produce something entirely new (Fichter, 2006). Sometimes the sources of the content may not be directly related. The newly created Web site resulting from a mashup may provide something new or meaningful compared with the content from each individual source. The word mashup originated in the music industry, where it referred to the mixing and blending of two or more tracks of recorded music or instruments in order to create an entirely new sound track. The concept of mashups on the Web is not new. Since the start of the Web, people have been gathering information from various sources and mashing it together with HTML code to present it in a newer, more useful form: Web pages. In information services and the field of knowledge organization, the concept of mashups is not new either. In these fields there has historically been a tradition of information service providers and knowledge organization vendors working with various sources, such as publishers, to collect publication and citation information, combine the collected data, and provide abstracts and indexing services. From the creation of abstracts and the population of indices, end users are able to find not only publications from a specific source, but also publications from a specific area, by a specific author, and so forth.

During the early stages of Web content integration, when the Web was still young, developers were required to manually collect and hand code information into an HTML page. In information services, the service provider may need to put the collected data from various sources into a central place such as a database to do further data processing, such as data normalization, and to provide an indexing service. Under Web 2.0, O'Reilly (2005) points out the Web as platform. Mashups use the Web itself as the programming and content delivery platform. Mashups access data or information directly from Web sites and programmatically create dynamically new Web sites or Web applications, presenting their data in a more integrated or useful way. Once the mashup process has been established, it will continue to automatically read, process, present, and update the content and data collected from different sources for the end user in the form of a Web site. Compared to the early stages of Web content integration, there is nearly no manual intervention at any stage of the process. Similarly, in the information services field, there has traditionally never existed a central place to aggregate and normalize data from different sources.

To begin creating a mashup, there are three necessary components: content or data sources, a mashup algorithm or process, and a presentation platform.

- **Content and data sources:** These are the foundation of any mashup; the raw objects the mashup will work with. Without content and data, a mashup has no definition. Content and data may be obtained via APIs, Web feeds, or screen scraping techniques. Recently, many providers have taken steps to make their content and data more readily accessible. Some have developed application programming interfaces (APIs) to give developers access to their content and data via Web protocols such as REST (Representational State Transfer) and also

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