

Web 2.0 Technology - Mashups: Enterprise and Web Vendors

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Abstract

During the past few years, the Web has gained renewed visibility in the media, particularly by the excitement generated by "Web 2.0." Featuring more than a set of technologies, Web 2.0's attributes have a social and business dimension. A new type of Web-based data integration applications is shooting up all across the Internet. One of which is colloquially termed Mashups. A lot of people are experimenting with Mashups using APIs from eBay, Google, Amazon, Microsoft, Yahoo and YouTube, which has influenced the creation of the Mashup editor. The capabilities of Mashup editors and vendors will remain in flux for years as implementations mature, new technologies emerge and vendors consolidate. As enterprises become more experienced with Mashups, and as new requirements become visible, the resulting opportunities for innovation will ensure that the market remains vibrant and competitive.

1 Introduction

Web 2.0 is best thought of as a term describing the second generation of the Internet, reflective of the capabilities of the Web today. The intent of this paper is to discuss one of these capabilities, a buzzword much heard about nowadays, Mashups, which can be added to the list of web 2.0 technologies, and to examine a few of the well-known mashup editors available in the market today.

Section 2 examines mashup technologies and provides an overview for those who are less familiar with their existence. Section 3 looks at Mashup vendors and categorises them into vendors with enterprise and web roots. Section 4 presents the conclusions.

2 Overview of Mashups

A Mashup is a new entity created by combining two or more established entities, and the sourced content or functionality retains its original essence or purpose. This definition has

changed and continues to evolve as mashups expand and mature on the public Web and in enterprises.

According to ZDNet; Mashup's are "A mixture of content or elements. For example, an application that was built from routines from multiple sources or a Web site that combines content and/or scripts from multiple sources is said to be a Mashup." [ZDNet, 2008].

Mashup's have three fundamental, defining characteristics that set them apart from other forms of application integration:

- They're lightweight, composite applications that employ Web-oriented architecture (WOA).
- They source content or functionality from established systems and have no native data store or content repository.
- The mashup result is an explicit mixture of source content and functionality, in which the sourced content and functionality retains its original essence or purpose. For example: Google Earth.

Google Earth offers a rich environment for visualisations and presentations, albeit in a desktop setting. [Forrest and Torkington, 2006] Google Earth is just a data visualization tool. That's all Google Maps is too, which has inspired a lot of Mashups. Mashups are simply adding in their own data to Google Maps. Google Earth is just the beginning. It's recently been followed by Microsoft's MapCruncher.

3 Mashup Vendors/ Editors

The Mashup market space is highly dynamic. Mashups are becoming rather easy to sell because vendors can quickly demonstrate their business value such as how pieces of enterprise data can be drawn into a Mashup to produce information with business value. In this research, vendors with mashup technology are examined in two categories: *Enterprise vendors* and *Web vendors*. These groups approach mashups from two different angles: Enterprise vendors use enterprise-strength systems that often result in robust, heavy applications. Public Web vendors' offerings

generally are more lightweight and easy to use, but less ready for enterprise implementation.

3.1 Enterprise Vendors

Companies will have to take on a series of APIs and build lightweight Mashup applications if they want to move ahead of cutting and pasting data into spreadsheets. Success with enterprise mashups starts with an understanding of users' needs and abilities as well as the role of mashups in your application strategy and portfolio. Most enterprise vendors are entering the mashup space from the application integration, information integration, rich Internet application (RIA) and enterprise portal markets. The established vendors generally have proven, enterprise-strength infrastructures, and they can leverage shared infrastructure capabilities across their mashup offerings. Two of these established vendors include: IBM's QEDWiki and Microsoft's Popfly.

QEDWiki is a browser-based, mashup development and assembly environment in which users create mashups by wiring together reusable, tag-based mashup components called "commands". QEDWiki employs a wiki framework that enables Web users and developers to collaborate on mashups within a single Web application framework. QEDWiki stays true to the nature of Web 2.0 by delivering an environment in which users can assemble, post, share, modify and collaborate on mashups.

Microsoft Popfly is a website aimed at the non-developer for linking web services displayed as blocks that can be assembled on a web page. It is Microsoft's first application built on Silverlight, their browser plug-in. Popfly consists of two main capabilities: Mashup Creator and Web Page Creator. These capabilities are coupled with a simple social network capability called Popfly Space. Popfly Mashup Creator features programmable blocks that use JavaScript. This release is a good example of evolving technologies that achieve the combination of Mashups and Web 2.0. The Silverlight based user interface is powerful, enticing and fairly easy to use. Popfly Web Page Creator enables users to build Web pages and place mashups on them to create a customized mashup portal. Popfly Space is a mashup Web 2.0 community for sharing, rating and commenting on user contributed mashups. Mashups built with Popfly can be shared easily or embedded on different Web sites, including Windows Live Spaces, Facebook and popular blog engines, such as WordPress and TypePad.

3.2 Web Vendors

There are many public-Web-based offerings. These technologies are more basic because ease of use is the primary design criterion, and because the technologies generally are directed toward public Web developers and users. However, some of these technologies target the enterprise and many have the potential for enterprise use. Two established web vendors include: Yahoo Pipes and Google Mashup Editor.

In 2007, Yahoo released Yahoo Pipes, a powerful composition tool, a visual Mashup builder that tech guru Tim O'Reilly praised as

"...a milestone in the history of the internet. It's a service that generalizes the idea of the Mashup, providing a drag and drop editor that allows you to connect internet data sources, process them, and redirect the output."

[O'Reilly, 2007]

Yahoo Pipes is a Web 2.0 environment for community building, sharing, rating and modifying mashups (or Pipes). Yahoo Pipes is a drag and-drop environment in which mashup feeds are accessed and "piped" through user-selected functionality to process the feed. Nonprofessional developers and power users can build their own Pipes, and can experience the mashup world and its potential benefits.

Google Mashup Editor (GME), now in limited beta, is a text-editor-based mashup development, test, management and publishing environment targeted toward Web developers who are familiar with tagging languages such as HTML, Cascading Style Sheets (CSS) and GME tags and with JavaScript. Business users probably won't use GME. The interface is simple and clean and understates the power of the tool. Neophyte programmers and Web amateurs can use GME to experiment with or build basic mashups. They'll be more productive in modifying established mashups than in creating new ones from scratch.

4 Conclusions

Mashups are certainly an exciting new genre of Web applications. As Mashups put more capability into an individuals hands and gives them more freedom to innovate and because Web 2.0 technologies are based on open standards, integrating them into an open business model is easy for end users and developers alike. Mashups will become much more end-user directed in the near future as facilitation techniques become more sophisticated. They will be created by almost anyone for just-in-time situations and projects, and even thrown away when their usefulness ends.

References

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