

Web 2.0 and BFSI Applications

by *S Ketharaman*

RSS, Blogs, AJAX, Podcasts, Wikis and Toolbars ... these are the basic elements of Web 2.0, the popular name for the collection of technologies that underscore the next wave of web applications. Web 2.0 is characterized by user-generated content. Leaders of this era have focused on setting up the platform whereas their visitors provide content, judgement or even glimpses of their own personality. Examples include **Wikipedia** (www.wikipedia.org), a free encyclopedia where users contribute and rate each other's articles; **Flickr** (www.flickr.com), where users store, search, sort and share photographs; and **YouTube** (www.youtube.com), which lets users do the same thing with videos. User-rating is becoming very popular in publishing, going by the runaway success of the technology article portal **Digg** (www.digg.com).

Barring a few examples given in the sidebar, Web 2.0 technologies have so far not made any inroads into business applications, whether in BFSI (Banking, Financial Services & Insurance), or in other sectors. Whatever few examples we were able to spot of the usage of Web 2.0 technologies in the BFSI sector were all restricted to RSS (**R**eally **S**imple **S**yndication).

However, this is likely to change pretty soon.

Gartner has recently called banks and financial institutions to use more Web 2.0 technologies in their IT applications. A recent report from the leading IT analyst notes that engaging with customers through call centers and via Internet campaigns is no longer sufficient. It recommends that banks adopt Web 2.0 technologies and applications in order to provide personalized service to customers.

In addition, IT organizations of banks are facing increasing demands from their businesses to launch Web 2.0 applications because "that's what customers want".

These, coupled with certain intrinsic advantages of Web 2.0 technologies (especially RSS and AJAX), are likely to lead to significant traction in the BFSI market place for development of new Web 2.0 applications as well as migration of existing applications to Web 2.0 technologies.

Banks and financial institutions seeking to be early adopters of Web 2.0 technologies would find that blogs, web toolbars, RSS and AJAX (Asynchronous Java Script and XML) are the low-hanging fruit. The combination of blogs, RSS and web toolbars can be used to improve communications and enhance customer loyalty. AJAX is the ideal platform for creating applications that demand the next level of usability and responsiveness.

Dresdner Kleinwort announced the launch of the industry's first global cross-asset class broker research RSS service. On its website <http://www.dresdnerkleinwort.com/eng/research/3783.php>, Dresdner Kleinwort informs its clients that that its RSS service "can help you cope with the staggering amount of information by consolidating a wide range of data and information sources together with multi-broker research, in a timely and cost efficient manner". Personalization, depth, breadth, security, and ease-of-use are some of the features offered by Dresdner Kleinwort's RSS service.

UBS Investment Research offers several RSS services as a fast and convenient way for its clients to keep themselves updated on new UBS Equity Research publications. Once a user subscribes to one or more of UBS' RSS services listed on its website (<http://www.ibb.ubs.com/Institutions/rss.s.html>), notification of new research is sent direct to the user's desktop, avoiding the need to log in to the website itself, or wade through hundreds of emails.

Banks and FIs can use a **blog** (derived from **web log**) as the mechanism for publishing details as diverse as launch of new products and services, research updates, changes to policies, etc. Using **RSS**, they can create alerts of new blog posts, as well as notification of publication of new bills in the bank's electronic bill presentment and payment sites. Through **Toolbars**, they can get their customers to notice such updates without having to visit the bank's websites.

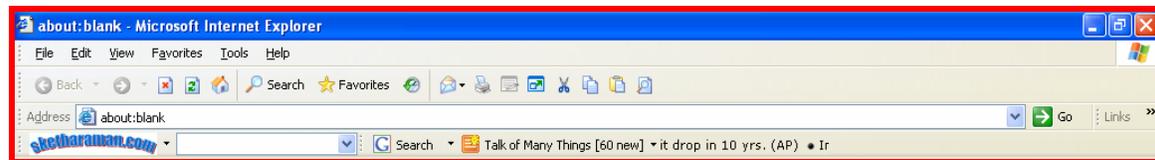
Let's understand how all this will work using the following example.

I recently created a web toolbar with three RSS feeds: one for home page stories in digg, the second for updates of my blog (called "**Talk of Many Things**" hosted in my personal website www.sketharaman.com), and the third for article updates on my employer's website (www.iflexsolutions.com). You can download and install this toolbar into your own PCs by clicking on the DOWNLOAD FREE TOOLBAR link on the lower left hand side of the homepage in www.sketharaman.com.

The toolbar looks like this:



After installing this toolbar in your PC, you will find that it appears just below the browser's search box. For example, in my PC, it appears just below the search box of Internet Explorer.



The "Talk of Many Things" RSS feed notifies toolbar users every time a new blog is posted on the sketharaman.com website, whereas the "i-flex Article Update" RSS feed alerts them to any new article published in i-flex's website. This happens automatically whenever toolbar users surf the Internet for any reason including, say, to check their webmail. They do not have to visit either sketharaman.com or iflexsolutions.com websites to get these notifications.

Now, let's say a bank creates a similar toolbar featuring RSS feeds. When customers install this toolbar on their PCs, they will receive automatic notifications from the bank whenever they are online, without visiting the bank's website or calling the bank's call center.

You can now easily imagine the power of Blogs, RSS and Web Toolbar technologies in communicating with customers better and thereby enhancing customer loyalty.

Now, let's look at the drivers for AJAX.

Greater power to communicate with customers using Web 2.0 technologies could also have an impact on the customer engagement levels. In the Web 1.0 context, a customer has to specifically remember to visit a bank's website. With Web 2.0, a customer checking her webmail over the

Internet could per chance notice in her toolbar an interesting update in the bank's RSS feed viz. an increase in term deposit interest rates. This could prompt the customer to visit the bank's website even though she had no prior intent of doing so. As a result, banks and financial institutions could see significantly higher levels of customer engagement as they accelerate the introduction of Web 2.0 technologies into their customer-facing applications.

This would call for taking usability and responsiveness of customer-facing applications to the next level.

Web applications have traditionally demanded high degree of usability since most of them have been used by non-IT savvy users unlike client-server and mainframe applications that have been used by "power users". As a result, screen layout, navigation structure and frontend functionality – these have always played an important role in the design of web applications. At the same time, the simplicity of web applications that enabled their widespread popularity has on the other hand seemed to rule out their use for more applications that have called for higher degree of responsiveness and richness.

AJAX holds tremendous promise for bridging this gap. In the words of AJAX.org, the official AJAX special interest website,

AJAX stands for Asynchronous Javascript And XML. AJAX is a web development technique used for creating interactive web applications. AJAX is the logical next step in the services-oriented architecture revolution. With AJAX, user interfaces from within the browser can use web services as their data source to store and retrieve information. Asynchronous JavaScript and XML is not a technology in itself, but is a term that describes a "new" approach to using a number of existing technologies together, including: HTML or XHTML, Cascading Style Sheets, JavaScript, The Document Object Model, XML, XSLT, and the XMLHttpRequest object. When these technologies are combined in the AJAX model, web applications are able to make quick, incremental updates to the user interface without reloading the entire browser page. This makes the application faster and more responsive to user actions.

AJAX applications can change in real time. You no longer have to wait for 5-10 seconds to reload a web page each time you click somewhere. Just one part of the page can get refreshed with new information fetched from the server without incurring the overheads of reloading the entire page. AJAX applications also permit users to drag boxes around and re-organize a web page without clearing it.

As a result, AJAX is ideal for web applications that demand a high degree of usability and responsiveness. Consequently, we see increased use of AJAX by banks and financial institutions in the development of new web-based applications and towards migration of some of their existing applications.

To predict the specific types of BFSI applications that can specifically leverage the approach and benefits of AJAX, we can take a cue from some of the pioneering implementations of AJAX like Google Mail, Google Suggest, Webify, Flickr, Google Maps, and so forth. From this, the following early candidates emerge: Stock Price Movement Chart, Branch Locator, ATM Locator, Private Wealth Management Portal, and so on. As we noted earlier, at the time of writing, we have not come across any live examples of AJAX-based web applications amongst banks or financial institutions, though that situation is likely to change very soon.

While AJAX delivers advantages in usability and responsiveness, its early adopters have reported some security concerns. While a full discussion of these concerns is outside the purview of this article, it suffices to say that AJAX applications seem to offer attackers a larger attack surface to work with than traditional applications. As a result, it is important to take utmost care while designing AJAX applications. Apart from exploring the use of AJAX patterns, banks and financial institutions can engage leading software service providers in their endeavor to develop new AJAX applications.

Unlike most waves of the past, Web 2.0 goes beyond the hype of what is possible tomorrow and can boast of real life applications that are running today. Identification of potential risks and mitigation measures at such an early stage is a highly positive sign and displays maturity of Web 2.0 practitioners. Combine these with the push from Gartner and from their businesses – we should be seeing strong traction among banks and financial institutions towards developing new Web 2.0 applications and migrating some of their existing applications to Web 2.0.



About the Author

With a B.Tech from IIT Bombay and a Master's in Marketing Management from Jamnalal Bajaj Bombay, **S. Ketharaman** has over 20 years of work experience in the IT industry.

Through his career, **S. Ketharaman** has worked in various roles in sales, marketing, delivery, program management and general management and across a wide range of markets like India, USA, UK, Germany, Switzerland, Singapore, Malaysia, Thailand and Middle East. Apart from solid experience in SAP, PeopleSoft and Ramco ERPs, **S. Ketharaman** has strong expertise in banking and payments solutions like Internet Banking, Payment Hubs, Cards, EBPP and Remittance. Earlier in his career, he acquired experience in hardware and networking products including Unix-based super-mini computers, Wintel servers, desktops, notebooks, WAN and IBM mainframe gateways. **S. Ketharaman** began his career in the engineering industry, where he worked for two years before moving into the IT industry.

Over the years, **S. Ketharaman** has developed frameworks and models in areas such as identification of differentiators, price forecasting and innovative service delivery. He has also authored many articles on topics like Web 2.0, software usability, ROI of ERP and ERP customization; these articles have been published in leading publications in India and USA. He also runs a blog called TalkOfManyThings.com, where he writes on a variety of topics including sales and marketing, technology, globalization amidst cultural differences, gadgets and gizmos, and so on.

Based out of London, UK, **S. Ketharaman** currently works for *i-flex solutions* and heads its payments business with a large UK-based global bank. For more information, please visit www.sketharaman.com or e-mail info@sketharaman.com / s.ketharaman@iflexsolutions.com.

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