

Mike Ogrinz Talks About Mashup Patterns

Q&A

3.18.09

Q: Will there be a recording available of this webinar please?

A: Yes! We have the recording, the presentation, this Q&A, and Chapter 1 of *Mashup Patterns* on our website at www.jackbe.com/news_events/mashup_patterns.php. Feel free to share it with your friends!

Q: Will you discuss the mashup added-value when transactional processes need to be implemented?

A: We won't be focusing on transactional as mashups don't necessarily add value to transactional processes. That is perhaps more appropriate for ESB tools.

Q: Do you consider XML content to be "unstructured data sources"?

A: XML is highly structured. All good mashup products can readily consume XML-format data sources.

Q: You briefly mentioned governance, how critical is it that the organization has a cross Biz Unit Enterprise Architecture body to enable (publish) access to a data silo(s) somewhere within the enterprise?

A: The answer differs based on the size of the organization, but we certainly think that an EA body can show a great deal of commitment to a properly-planned adoption/implementation strategy for mashups. To enable cross-business unit mashups, you typically plug-in to the existing centralized identity management system, such as LDAP. This allows you to set governance policies and propagate the user's credentials to the services.

Q: Beyond presentation (mashlets), how mashups can lead to leaner process automation by mixing info from different types of applications?

A: Mashups can certainly help consolidate data from multiple processes into a single environment.

A: EMMML and Wires support mini flows that pass data from one service to another. However, mashups processes are immediately executed. They are not long lived.

Q: Is this like a simplified workflow with data points?

A: Mashups can be used to implement workflow and is in fact one of the patterns in the *Mashup Patterns*.

Q: Do you have samples of public administrations having applied mashups technologies on their websites/portals? (e.g. providing services to their citizens)

A: Yes, there are a few good ones. I'd recommend you take a peek at the forum thread on our Mashup Developer Community as a starting point:

<http://www.jackbe.com/enterprise-mashup/forum/whats-best-mashup-example-you-have-seen>.

Q: How does a mashup compare to business intelligence?

A: In short, they compliment each other but have drastically different implementation characteristics/architecture. BI is more about ETL, Data Warehouses and Data Marts. Essentially, it is a copy of the data used for historical analytics and reports. Mashups consume data from BI sources and other sources and presents the data to the user in real-time.

Q: What is the difference between a mashup and a Portal? Don't they both just collect disparate data and present it in one central area?

A: Mashups do not require an interface, while portals are extremely UI-bound. Also, there are many parts to a portal; the portal server and the portal UI are the two major ones. In the Java world, the UIs are JSR-168 compliant portlets. Presto produces Mashlets that are JSR-168 compliant and thus can work inside any portal.

Q: I don't understand the BI point on this screen as we know that excel is THE solution used by the business users to do their job. I have difficulties to see mashups helping in any way?!?

A: Spreadsheets can be a great source of input to mashups! A good mashup platform can make a wide variety of data sources (including spreadsheets, HTML pages, SQL databases, web services, etc.) can make all of these sources look virtually similar to the mashup-maker. (JackBe even has a 'Mashup Connector for Excel' to make this easy.) Alternately, spreadsheets can be a great destination for a mashup, along with portals, websites, and mobile devices.

Q: What are some of the ways we can address the security issues and concerns related to enterprise mashups that leverage external data sources?

A: There are 8 'anti-patterns' in *Mashup Patterns* that address security; there's also a section on 'securing mashups'.

Q: There are some benefits to portals e.g. governance. Do you see portals as a way to deliver mashups?

A: Absolutely. The possible destinations for mashups can be just about any digital format, including spreadsheets, portals/websites, back into an 'SOA cloud', and mobile devices.

Q: Are you going to show us an example of pre-mashup and post-mashup for those of us who are "visual learners"?

A: JackBe has some great introductory videos in our 'Mashup Training' series:
http://www.jackbe.com/news_events/mashup_training.php. Check it out!

Q: What level of SOA maturity is required as a prerequisite for effective enterprise mashups?

A: None! An SOA can be a great ENABLER for mashups but a good mashup platform can support lightweight 'virtual' services on data sources (which you use until these data sources are formally SOA-enabled). We wrote a bit about this in SOA Magazine (<http://www.soamag.com/l18/0508-1.asp>).

Q: Mostly Mashups talk about UI level integration, how do they provide "data-level" integration b/w disparate systems by resolving conflicts?

A: One of the core abilities of mashups described in *Mashup Patterns* is 'Transformation', which migrates data from source systems into a common 'mashable' state, which can help you resolve cross-system representational issues.

Q: Portal was a big head-ache for our Company. Portal made our elevations times much longer; the upgrades were painful; it had big performance issues, just to name a few of the problems. We invested big in time & \$\$\$ into the portal product, then had to backout. We ended up using "tried-n-true" servlet technology to do the same thing. Tell me why a Mashup Platform like Presto will be any different from a maintenance & elevation perspective?

A: Presto secures and governs all resources so mashups can be "deploy-less". In other words, with security and governance in place, mashups become "available" in runtime without requiring deployment.

Q: to cover the other 80% of user requests we still need to build API or someway for user to access data needed. How does an enterprise decide which is most important. This seems to be the same problem as SOA...

A: You can expose mashups incrementally. Since mashups get data to the users, the best practice is to start exposing and mashing up data that is most requested and critical to business decisions.

Q: Some "mashups" have ability to support some business logic (eg: scripting languages)... are these considered mashups?

A: Presto's EML language lets you apply data logic using XPath/XQuery, JavaScript and Java.

Q: So the take home here is that a mashup is a philosophy rather than a technology right?

A: First and foremost, mashups is an architectural *style*. Enterprise mashups are server-based and are capable of mashing WOA (web oriented architecture) style services.

Q: What are the job description(s)/role(s)/prerequisite(s) for the IT staff who support/interface with the mashup 'end users/creators'?

A: Security and governance is usually handled by IT admins and developers. Mashups can be created by IT developers and business developers and technically savvy business users.

Q: Who defines the standards for mashups standards?

A: There is no mashup standard yet. However, mashups are based on XML and Web standards.

Q: Are you aware of the Illumin8 semantic search software from Elsevier? It provides a similar kind of mashup of information on scientific and other innovative technologies: <http://www.illumin8.com/home.php>.

A: We have heard of it. In JackBe's case, we have a more generic enterprise mashup platform that can bring a mashup capability to any organization, regardless of their industry or focus.

Q: How do you address data quality used in mashups? End users can misinterpret results.

A: A best practice is for IT to publish "authoritative" services as mashables. This provides a level of trust in the data. As for the quality, it depends on the data services. IT has full control over establishing data quality guidelines for the mashable services.

Q: Could you explain what is the place of SOA w.r.t. Mashups?

A: Check out <http://www.soamag.com/l18/0508-1.asp> (and Part 2 of this article series, as well). We think this connects SOA and mashups pretty well.

Q: On slide 18, the Mashup Server concept looks similar to Portal Server pattern

A: You are correct. The mashup server runs in Tomcat which means it can also run in a Portal. This makes it look architecturally like a portal. Difference is, the mashup server can co-exist with the portal or be use without the portal.

Q: Will you address security issues of access data from multiple resources?

A: Good one! JackBe is supporting mashup efforts in some of the most secure government agencies in the world. We've found that mashups work best in a multiple resource environment when there is a common user credential store such as LDAP, Active Directory and PKI. Since mashup servers authenticate based on the user credentials, it can easily propagate the user's credentials to multiple services so they can apply the appropriate authorization policies.

Q: Have you seen successful mashup deployment on Force.com platform?

A: We have a demonstration of the Force.com mashup at <http://www.jackbe.com/enterprise-mashup/blog/presto-demo-web-20-expo-mashing-salesforce-and-web-site-analytics-oracle-portal-server>.

Q: When you bring back the context data - is it ALL of the relevant information contained in the data sources, or is it selected information -like a pointer system?

A: We point to the data source and let you create a reduced dataset and even annotate with additional data.

Q: Are the external data sources RSS feeds?

A: They can be RSS, REST, DBMS, WSDL, ATOM and Excel.

Q: How do we calculate the ROI of doing Mashups? Most of time, it's difficult to sell this concept to CIO.

A: Best ROI metric is time it takes to get the mashup data to the business user. Mashups can happen in hours and days.

Q: Mashups seem to have great value for the enterprises since they are empowering the users themselves. Can IT services companies bring value to their enterprise customers thru mashups?

A: Yes. Mashups can be created by IT service companies and be made available as building blocks for enterprise customers to mashup.

Q: Excel "apps" that is scalable, maintainable and secure could be built with MOSS (Microsoft Office SharePoint Server) deployment and give the power to end user. Why should we embrace Mashup?

A: Mashups and SharePoint compliment each other quite well, particularly if your data sources are not just Excel but include SOA services, XML/RSS, SQL databases, etc. Check out our 10-part blog series on 'Mashups and SharePoint': <http://www.jackbe.com/enterprise-mashup/blog/mashing-sharepoint-introduction>. Give us your feedback on it!

Q: Will copyright law be discussed?

A: There is a section in *Mashup Patterns* that discusses fair use and intellectual property protection.

Q: Can we implement or use these Mashups with middleware products like JCAPS, TIBCO, BIZTALK, WEBMETHODS etc?

A: Every mashup has standardized interfaces like RSS and REST. Products like JCAPS, TIBCO, BIZTALK, WEBMETHODS can certainly consume the mashup through these APIs.

Q: Mashups seem to have great value for the enterprises since they are empowering the users themselves. Can IT services companies bring value to their enterprise customers thru mashups?

A: Absolutely!

Q: How do build a feedback loop to IT?

A: We capture all statistics and feedback on the mashups. This data is available to IT.

Q: If I am not mistaken, "Accessibility to the blind" is a requirement of websites in USA. Is it true that Mashups do not support this?

A: There is a section in *Mashup Patterns* that discusses how mashups can add accessibility to websites that do not already have these features (and without the involvement of the original development team).

Q: I feel that the same can be accomplished by Enterprise Integration efforts. Is Enterprise Mashups just another way of defining the same effort?

A: No. Enterprise Integration is best suited for integrating data across systems. Mashups don't integrate data across systems, but rather mash data from these systems and get it to the user.

Q: Is there such a concept as making a source "mashup friendly"?

A: Yes. We call it 'making it mashable'. We've written a bit about this on our blog: <http://blogs.jackbe.com/2008/11/3-parts-of-mashing.html>.

Q: Linking and translating data are the trickiest part of data mining; will you be addressing the ETL issue?

A: We don't do ETL on a grand scale. That's best left for ETL and BI systems. We do small ETL in real-time so users can make better sense of the data.

Q: You say OO re-use doesn't work for the reasons you stated. I agree but what about web services?

A: Webservices is a great example of reuse.

Q: Mashups seem well suited for information centric / lightweight BI applications, but how do these solutions evolve over time or provide enterprise capabilities for inclusion of more complex business logic, or support for business processes, rules, event processing, etc.

A: Mashups are done on services. Business processes, rules engines and event processors can be exposed as

webservices and mashed pretty easily. The reverse is also true: a mashup can be embedded in a larger business process, in support of automated decision-points in the process.

Q: Can mashup technology be utilized using a combination of internal corporate data plus external data and present this to external customers without exposing the mashup as a building block for another (external) mashup? The concern is security, can this final mashup be re-used? That is, can this be blocked/controlled?

A: All mashups, services and mashups are secure and governed.

Q: Are there specific technologies associated with the creation of a mashup?

A: There are. Coincidentally, we held a 3-hour 'Mashup Training' webcast last month. I think it's a good getting-started series: http://www.jackbe.com/news_events/mashup_training.php. Beyond this, we have TONS of good videos, blogs, and whitepapers, on the architecture/technology of mashups on our website (<http://jackbe.com>) and our Mashup Developer Community (<http://jackbe.com/dev>).

Q: You just defined "Enterprise Mashups". What are "Business Mashups" then? Is it different from Enterprise Mashups?

A: No, they are the same.

Q: In companies that have adopted mashup technology, what are the average actual usage statistics (e.g. 5 built per month)? What type of users actually end up building these mashups (business users, IT, admins)?

A: Yes, we capture all of user statistics.

Q: Will you get into how Mashups and Workflow and BPM work together, risks, issues, etc...?

A: Mashups and BPM compliment each other well. Business processes, rules engines and event processors can be exposed as webservices and mashed pretty easily. The reverse is also true: a mashup can be embedded in a larger business process, in support of automated decision-points in the process.

Q: The Enterprise IT department provides the Mashup Platform, in your experience is the intention to eliminate IT demand (the long tail of IT request, this assumes business users are creating the mashups) or is it to increase IT supply by giving IT an easy way to provide more of the long tail (IT creates the mashups)?

A: In JackBe's experience with our customers, it is a bit of both. Some organizations it is much of the former, in others it is some of both, and in others it is much of the latter. It varies quite a bit.

Q: What is the future/scope of "Semantic Mashups" w.r.t Semantic Web?

A: Mashups can provide a "contextual lens" that helps with the data semantics. There's a section in *Mashup Patterns* on this. JackBe also discusses this topic in a blog, '[The Semantic Enterprise: Are Semantics the Future of Mashups?](#)'.

Q: You briefly mentioned governance, how critical is it that the organization has a cross Biz Unit Enterprise Architecture body to enable (publish) access to a data silo(s), as well as publish mashups for reuse?

A: EA is very important. To enable cross-business unit mashups, you typically plugin to the existing centralized identity management system, such as LDAP. This allows you to set governance policies and propagate the user's credentials to the services.

Q: 'Shadow copy' sounds very interesting - but it raises some IPR challenges unless the data is open source

A: Agreed. There are always data provenance and ownership issues to consider, particularly if the mashup is going to be shared or traded/sold.

Q: Are Mashups Stateless or Stateful applications?

A: Stateless.

Q: I don't see any difference, so far, between SOA and mashups. Many SOA vendors also provide Portals to work with SOA services. (and business users who know the data are responsible for their services)

A: There are certainly differences, particularly in the patterns and techniques (and hence, the tools) for SOA and mashups. In short, think of mashups as 'user-focused, real-time SOA'.

Q: Having all these mashup agents running around is really going to affect hit rates and bandwidth; almost like an unintentional denial of service?

A: The 'Alerter' pattern in *Mashup Patterns* discusses this issue. Generally, the mashup impact on source systems is equivalent to all other traditional infrequent requests on these sources.

Q: What is widget or gadget w.r.t Mashups?

A: We call them 'mashlets' (i.e. a widget interface on top of a mashlet). You can read a bit more about them at <http://www.jackbe.com/products/mashlets.php>.

Q: How does your tool harvest data from Flash/Flex apps on web sites?

A: Most Flash/Flex apps communicate through SOAP/Web Services. This format is certainly consumable by a

mashup platform.

Q: Which industry has the greatest mashup growth rate. ie retail, manufacturing, insurance etc.

A: Government is #1, by far. We've also seen uptake in the healthcare industry, banking/finance, shipping/logistics, and research/higher education.

Q: After creating a Mashup (which is a service in itself), can it be deployed in a SOA environment e.g. publishing it in UDDI etc?

A: Yes. We've written on this quite a bit. Start with <http://www.soamag.com/118/0508-1.asp>. After that, check out our blogs (<http://blogs.jackbe.com>) on SOA.

Q: If I extract data from a vendor site to reuse under my own flag, is copyright going to be (potentially) an issue?

A: You certainly have to be mindful of Terms of Service and Subscription Policies when using third-party, external sources.

Q: Do you have any examples of mashup efforts within DoD?

A: DIA and DISA are both implementing mashups (they are both JackBe customers). There are summaries/announcements on <http://jackbe.com> about them.

Q: Does decentralized authorization across disparate secure data sources create inefficiencies in the mashup user experience? Can these be solved through a account/password registry in a secure fashion?

A: Having a common credential strategy works well when you decentralize authorization. It is a best practice to move authorization policy decision points closer to the edge in a trusted environment.

Q: Standards are important to enterprises as well. Are there efforts underway on this front w.r.t. mashups?

A: There are but they are not public yet. It'll be 2-6 months and then you'll see some good stuff in this area.

Q: What is the future of Enterprise Mashups w.r.t to Semantic Web?

A: Good question! There's a section in *Mashup Patterns* on this. JackBe also discusses this topic in a blog, '[The Semantic Enterprise: Are Semantics the Future of Mashups?](#)'.

Q: What is the basis for your statement that "anything on the web is free game" -- many websites have restrictions on use that you must agree to before proceeding (for example, before tracking a package on UPS.com)?

A: There is a section in *Mashup Patterns* that discusses fair use and intellectual property protection.

Q: Is there any documentation on expense savings mashups have created by company or industry?

A: There are many great case studies (some with ROI savings) on http://www.jackbe.com/customers/case_studies.php.

Q: Which industries / verticals are quicker to adopt mashup technology?

A: Government is #1, by far. We've also seen uptake in the healthcare industry, banking/finance, shipping/logistics, and research/higher education.

Q: Do you have any design patterns / guidance for the relationship between lightweight web services (REST Services, RSS, Atom, etc) and SOA tools used to manage "heavier weight" web services (WS-*) such as service registries, XML application gateways, ESB's, etc? (ie: what role, if any should these tools play in "Lightweight Service" portfolio management, security, and integration?)

A: This is a fairly zzz

Q: Transactional cases: I looked into the links you gave about usage of mashups inside eGovernment applications but I haven't seen any transactional ones. Could you confirm that most of the mashups applications are 99,9% non transactional ones?

A: Mashups handle "compensating transactions".

Q: What about how reliable an external resource can be if it's not under your control? What if Google suddenly changes their api or interface or eliminates it?

A: Typically, an API is a contract. Established companies like Google usually versionize their APIs.

Q: Are enterprise Mashups portable to different web/application/mashup servers?

A: Yes. Mashups are very standards-oriented, so they can be connected and interconnected easily. And most of the mashup platforms are also pretty multi-server certified (JackBe's mashup platform runs on just about every web/app server).

Q: Mashups seem to proliferate in map mashup and news feeds. Is there a real market outside maps?

A: We have a bunch of blogs on '[Mashups in Action](#)', most of which are not news on a map.

Q: How secure is a system using a Mashup? Is it Hack proof? We are using data from other sources and should not

end up sharing that data with hackers.

A: We build mashups for the DoD that use PKI and two-way SSL from the browser to the mashup server. So, given the right mashup platform, mashups can be highly secure.

Q: What are the best practices to mitigate website saturation if one or several mashups are hitting the same source website?

A: Using Presto EMM, you can do business caching when appropriate.

Q: The example being shown seems very custom. If custom 'mashlets' have to be developed, what's the benefit of developing a mashup versus developing a web application using traditional tooling? Are there productivity benefits you've seen?

A: Mashup widgets are much smaller than traditional Web applications. Also, mashup widgets are based on dynamic scripting languages and can be built much faster than using traditional languages.

Q: It seems mashups won't grow to its potential until tools are available for the business users to easily create the data combinations they value. What are the best business-user tools available today?

A: We certainly agree. JackBe works pretty hard to have mashup-creation tools that work for developers AND tools that work for business-users. Gartner recently said in '[Cool Companies to Watch, 2009](#)' that JackBe's strength was in its support of technical and non-technical mashup creators.

Q: Are their best practices for a template on how to organize your mashups? (Not patterns but a template to be used for enterprise mashups)

A: Using a combination of providers, tags and categories appears to be working well.

Q: Many of these websites that are data sources are Ajax-based, hence pages created on the fly. Can Mashup tools harness Ajax based websites as well?

A: Yes. Good screen-scaping tools can harvest Ajax-based data.

Q: Are any industry standards emerging for a component model for these visual "widgets" that may be assembled on a mashup page, or shared across mashup platforms?

A: The Open Ajax Alliance is currently working on a widget component model.

Q: The value (and potential risk) of disparate information sources may be larger than the sum of the parts. (your competitive analysis pattern) Are there any design patterns (or tools) for service providers to understand how their information is being used (in perhaps anticipated ways).

A: Presto captures all the linkages and dependencies among mashups.

Q: Are there any legal implications with mashups development?

A: Perhaps. Copyright law could be relevant when publicly-available APIs are used for mashups.

Q: How do you assess the accuracy or reliability of the source data. How do you know you aren't being fed false data? What ESB security are you using.

A: We believe IT is responsible for publishing the authoritative data services.

Q: What is the typical development time required from concept to demonstration for Mashups? Do you utilize any "Use Case Analysis" in their development and design?

A: It can be as small as a few hours or days or weeks. That exemplifies the speed at which mashups can be created. But *not* months or years.

Q: Given that enterprise mashups are created by everyday users, are there any user interface (UI) related best practices or guidelines for building these mashups?

A: IT also creates mashups. The UI best practices are to make the UI aesthetic, highly interactive and small, as in support a small set of functions.

Q: If the tools are for both developers and business users, how is duplication of applications reduced (since we know that the communication between the two communities isn't necessarily 'open')?

A: The mashup software must promote sharing and re-use. This is what makes a mashup platform produce real value to an organization. We've written a bit on this in <http://blogs.jackbe.com/2008/10/mashup-recycling-now-this-is-green-it.html> and <http://blogs.jackbe.com/2009/02/it-pays-to-be-virtuous.html>.

Q: Users will out! Mashups are an evolutionary extension of the mainframe-vs-PC wars of 1970-80s. IT must manage rather than control user and department level business automation extensions (my definition of mashup). Back then our greatest concern was not to impede such evolution but finding new ways of managing and sharing it. Are these Mashup Patterns focused toward the business-level development, IT management, or both?

A: Great question! It is both. Gartner recently said in '[Cool Companies to Watch, 2009](#)' that JackBe's strength was in its support of technical and non-technical mashup creators.

Q: Is Mashup driven by AJAX?

A: The mashup interfaces are often Ajax-based. These interfaces can also be built using Java, Flash, Flex, Silverlight and many other web-GUI toolsets.

Q: How do we deal with lack of service level agreements for APIs from external sources? What are the workarounds?

A: No workarounds are required. A good mashup platform can also provide 'mashup enabling' capabilities, and doing it in a governed way (i.e. connected to the authentication/authorization/governance tools you might already have).

Q: Which framework do you recommend to build such mashup app?

A: JackBe's Presto, of course!

Q: Is there any time during the presentation to show the GUI builder portion of an end-user rapidly building one of these mashups?

A: There are lots of good videos on this topic on our Mashup Developer Community:

<http://www.jackbe.com/enterprise-mashup/content/mashup-training-videos>.

Q: Can Mashup Platforms integrate with a SSO architecture already present in an organization?

A: Yes, Presto plugs into existing SSO systems.

Q: Can we implement or use these mashups with any middleware products like JCAPS, TIBCO, BIZTALK, WEBMETHODS etc?

A: The experts will tell you that these tools are decidedly developer-oriented. A good mashup approach allows for real user-oriented mashup-creation (as well as developer-driven mashup-making).

Q: Do we see mashups moving towards the flexibility & convenience of pivot tables to Excel? Is there an application that quickly assembles these disparate data sources?

A: With a little work, we've created mini pivot tables using Mashlets.

Q: Say we have a legacy app that is written in VB code that wraps multiple web browsers. The web browsers actually call different java ear files; plus the VB code invokes java web services via SOAP. Could we "rewrite" this app as mashlets using the basic underlying java services & publish the "package" to a browser? Or basically simplify this legacy app plus make it customizable by adding new mashups?

A: Yes, that is a great use-case for mashups. And it could be completed particularly efficiently using the underlying Java services.

Q: Can you discuss the use of SOAP web services versus REST services for use with Mashups? We have a mature SOA, but we built it on SOAP type services. What impact will that have on our ability to leverage Mashups?

A: That's kinda detailed for today's webcast. One of our VPs of Development would be happy to discuss that topic with ya. Send me a note (chris@jackbe.com) and I'll get you connected to him.

Q: Have we come to a level where business users can write mashups? It still looks like its an IT function.

A: We are very close. Gartner recently said in '[Cool Companies to Watch, 2009](#)' that JackBe's strength was in its support of technical and non-technical mashup creators.

Q: Regarding 'api enabler'...are you using the browser source or more of a screen scrap for creating an external website API?

A: Many website APIs are RSS/Atom/XML, so no scraping is required. But if that's not an option then, yes, screen scraping can be a viable choice (given the right kind of website).

Q: But isn't screen scraping error prone? (It can break very very easily).

A: Screen-scraping isn't an optimal strategy but it is critical when considering legacy sources of information. In the cases where structured formats cannot be applied in a cost-effective manner, screen-scraping is a good option.

Q: Our firm is not going to go out and scrape info from the web. How about an example where internally we can mashup mainframe data, existing java webservice calls via SOAP, and data from an excel spreadsheet! Is this possible with the mashup platform?

A: Yes, it is. Most of JackBe's customers fit this profile. We have case studies/summaries on <http://jackbe.com> (and videos and mashup demos as well) like this.

Q: Are these APIs being cataloged in a central repository?

A: All services, mashups and mashlets are stored in the Presto repository.

Q: In the examples on competitive analysis, were APIs used to get data from different sources or was data obtained via HTTP and then parsed? I'm guessing a lot of retail sites don't necessarily provide APIs to access their price data.

A: That is where screen-scraping technologies can help. They can create mashable services from such sites.

Q: How would you compare or link J2EE patterns with Mashup patterns?

A: J2EE patterns focus on J2EE technologies, Mashup patterns focus on mashup architectural patterns.

Q: How much does the use of mashups increase storage need and capacity? It is obviously inherently dependent on how many... and how long they hang around or are for re-use... but is the impact huge?

A: Mashups don't store data, they only mix and move data. So storage is based on number of services, mashups and mashlets published.

Q: Can these feeds that are aggregated from websites be used as a source to downstream mashups?

A: Yes, mashed up feeds can be exposed as a REST or RSS service for further mashing.

Q: What level of training will be required for business users to build Mashups? Do you see the primary Mashup developers being a subset of the business users (like IT light)?

A: Yes, we certainly see the mashup-creators as a subset of the overall business user community. As for training, more and more users are 'mashup savvy' every day; basic mashups are not any more complicated than Excel macros or a personalized iGoogle portal. The real training would only likely be related to the specific features of the mashup platform you are using.

Q: How do you compare the Enterprise Mashups with Portals? Do Mashups replace Portals?

A: There are many parts to a portal; the portal server and the portal UI are the two major ones. In the Java world, the UIs are JSR-168 compliant portlets. Presto produces Mashlets that are JSR-168 compliant and thus can work inside any portal.

Q: Does JackBe offer any mashup tutorials?

A: Absolutely. We have over 40 videos on mashup-making on our Mashup Developer Community:
<http://www.jackbe.com/enterprise-mashup/content/mashup-training-videos>.

Q: Mashup technologies were used successfully to co-ordinate survivor searching after Hurricane Katrina. How realistic is the existence of a National, or indeed International network of resources for any future disasters?

A: The dynamic assembly of data sources for critical decision-making is a great use-case for mashups.

Q: How easy is it for internal IT personnel within an agency to add/modify sources that feed the mashup? Or does it require customization from the company itself?

A: It HAS to be easy for the internal IT personnel within agency, or you won't get that real explosion of mashups created by the users who actually need them. 'Customization' to create a mashup is certainly not allowed!

Q: As users create mashups, can this be difficult for IT to manage? Errors occur. Changes do too. In a mashup how does IT know who consumes the mashups and alert them?

A: Presto maintains knowledge of all the interdependencies between mashups and services.

Q: Again a confusion with Business Mashups. The examples I see are all data aggregated to make sense together. Sounds like a data mashup. Aren't business mashups more interactive by allowing users of the mashup to interact with the mashup?

A: "Business mashup" and enterprise mashups are the same. You may be talking more about user workflow or business process management.

Q: What are the legal implications of scraping third-party sites? For example: scraping Craigslist. Can I do it without their permission or do I need permission in some cases? Don't companies own the information that is published on their web sites sometimes?

A: Of course it all depends on the legal restrictions of the content provider.

Q: Do the patterns translate into the public/government sector or do they have to be adapted?

A: All patterns work in the public and government sector.

Q: One of the challenges is the Data that we look for or wish to aggregate is not always freely available and if we wish to use them in commercial products have to go through the licensing process and have agreement with each of these vendors. What are your thoughts around this?

A: There is a section in *Mashup Patterns* that discusses fair use and intellectual property protection.

Q: Have you offered this to the fusion center community? Have you worked with any fusion centers?

A: Presto is very capable of working in the Fusion centers based on our DoD solutions.

Q: Are there any international standards for enterprise mashups development? I mean is there any one body who defines standards?

A: Stay tuned. We're working on this!

Q: A lot of these use cases seems to be very "read" centric. How many use cases are there for updates of information, and what facilities (if any) are available for assured delivery / "transaction coordination" of the data update?

A: Presto supports XA transactions across databases. And for all other services Presto can detect errors and timeouts and perform compensating transactions.

Q: Can you have input fields in the Mashboard that feeds multiple mashlets on the dashboard?

A: Yes.

Q: Has there been any mashup experience used/maintained in the Healthcare industry, more importantly in the integration space (data content sharing)?

A: There has been much discussion around personal-records dashboards and wellness mashups.

Q: Any guidance on Mashup server choices? i.e. Best in Breed?

A: Presto, Presto, Presto.

Q: Do you have a recommendation for a site which lists popular available data sources used in mashups?

A: We often use <http://programmableWeb.com>.

Q: Thanks guys - has anyone hosted Presto on Amazon's cloud platform?

A: We are running Presto on EC2 now.

Q: What if web site has "proprietary" statement on their web site that you are extracting data from?

A: You should respect those terms. Find another source.

Q: How can Mashups, Wikis and CMSs be combined to take advantages of the strengths of each?

A: Mashups can be created from Wikis to CMSs, connecting these kinds of data to other structured sources like ERP, CRM, and SFA systems.