



IBM Lotus Mashups documentation

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Introduction

This document contains a list of frequently asked questions as well as a glossary of common terms used throughout IBM® Mashup Center.

General frequently asked questions

See the following general frequently asked questions and answers.

- “What is a mashup?”
- “What are some examples of mashups used in a business environment?”
- “Which widgets are provided by default with Lotus Mashups, and what do they do?”

What is a mashup?

A mashup is a lightweight Web application created by combining information or capabilities from more than one existing source to deliver new functions and insights. Mashups typically mash data either to create a new data source or a new application that presents data in a single graphical interface. In a business environment, a mashup typically combines enterprise and Web-based data from an assembly of widgets into a single, dynamic application to address a specific situation or problem.

What are some examples of mashups used in a business environment?

In an enterprise environment, you can use mashups to solve a wide variety of business problems and day-to-day situations. Here are just a few examples of these types of mashups:

- A customer data mashup that provides a quick view of customer data for a sales person in preparation for a customer site visit. Data can be pulled from both departmental and Web-based sources. Can include information such as contact information, links to related Web sites, recent customer orders, lists of critical situations, and more.
- A logistics mashup that displays inventory for a group of department stores based on some sort of criteria. For example, you can mash current storm information onto a map of store locations, and then wire the map to inventory data to show you which stores located in the path of storms are low on generators.
- A human resources mashup that provides a quick glance at employee data such as profiles, salary, ratings, benefits status, dogears, and activities. Can filter data to show only certain pieces of information, for example which employees are paid a certain salary.

Which widgets are provided by default with Lotus® Mashups, and what do they do?

Lotus Mashups offers several out-of-the box widgets, for example:

- **JavaScript Adapter** -- uses JavaScript™ to transform event data (also called a payload) from one widget to a different value or type and then republishes the data to another widget on the page. This is useful when the event data from one

widget does not match the event data from another widget, preventing you from being able to wire the two widgets together.

- **Regular Expression** -- finds and replaces strings within larger strings based on a specified regular expression.
- **Web Site Displayer** -- displays a Web site based on a specified URL.
- **Feed Reader** -- displays the content of a feed. Can receive a feed URL from another widget on the page.
- **Customer List** -- a sample **Data Viewer** widget that is configured with a URL that points to a feed in the catalog. The feed data includes customer names, addresses, zip codes, contact information, ticker symbols, company Web sites, and feed URLs.
- **Data Editor** -- uses common operations such as sort, filter, and truncate to transform content received from one widget into outgoing content to be sent to a second widget. Can receive content from a remote feed URL or a new feed generated from a comma-separated value (CSV) text file or a JavaScript Object Notation (JSON) array.
- **Data Viewer** -- organizes and displays content in a table. It can display data from an Atom feed or from a file that contains data in a comma-separated value (CSV) format. Can send both send and receive content.
- **Portal** -- displays a portal page from a specified IBM WebSphere® Portal URL. When users first access the widget in the mashup application, they have to log in with their credentials to display the page.
- **Sametime** -- allows users to log into IBM Lotus Sametime® Connect and chat with their contacts without having to open the application outside of the mashup page.
- **Bar Chart** -- displays two or more values from a specified data source as a chart with rectangular bars that represent the values.
- **Image** -- displays an image that you can upload from a URL.
- **Line Chart** -- displays values as dots that are connected to form a line on a chart.
- **Pie Chart** -- displays data in a circle graph divided into pieces. Each piece of the circle represents a value as a percentage of some whole. For example, if a value is 20 units out of 100, the sector takes up 20% of the circle.
- **Event Explorer** -- displays event data published by a different widget on the page. Has to be wired to the other widget to display event data.
- **HTML Markup** -- displays a Web page based on HTML code typed or pasted into an editor.

For more information about how to configure these widgets and see useful examples of how you can use them in your mashups, see the widget help in the IBM Mashup Center wiki at <http://www-10.lotus.com/ldd/mashupswiki.nsf>.

Frequently asked questions about creating, assembling, and exploring mashups

See the following frequently asked questions and answers about creating, assembling, and exploring mashups.

- “What does it mean to wire widgets?” on page 3
- “What does it mean to configure widgets?” on page 6
- “How do I create a new widget?” on page 7
- “How can I make my data “mashable”? ” on page 7

- “How can I use feeds in my mashups?” on page 7
- “I see both feeds and feed mashups in MashupHub. What’s the difference between them?” on page 7
- “Can I add tags, comments, and ratings to widgets?” on page 8

What does it mean to wire widgets?

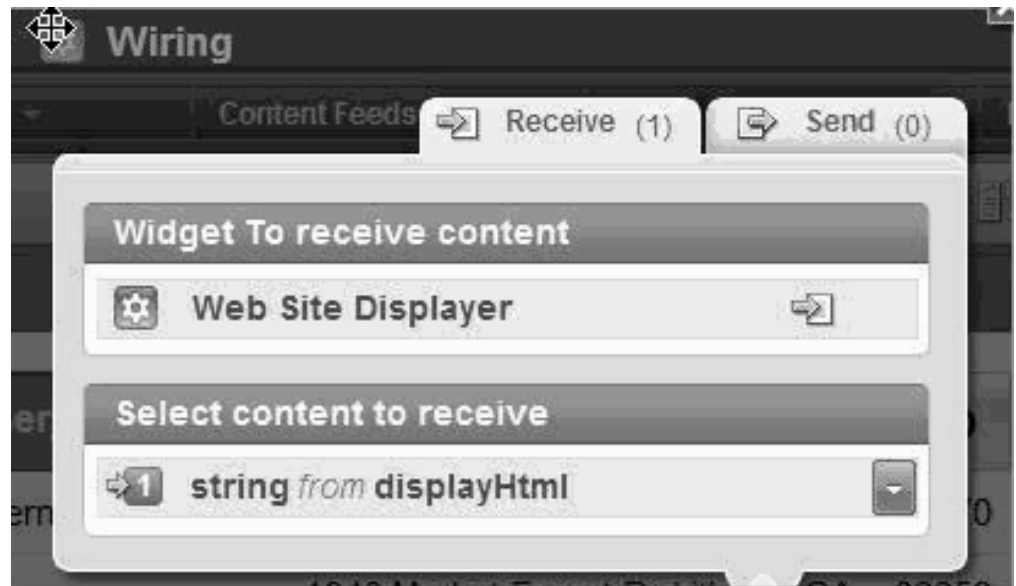
When you wire two widgets, you essentially introduce the widgets to each other and tell them how to communicate. The widgets communicate by passing event data (often called a payload). One widget sends the data, and the other widget receives the data. The sender widget sends data as a result of some event, such as clicking a cell in a table. When the receiver widget receives the content, a designated action takes place, for example a page refreshes and displays updated information.

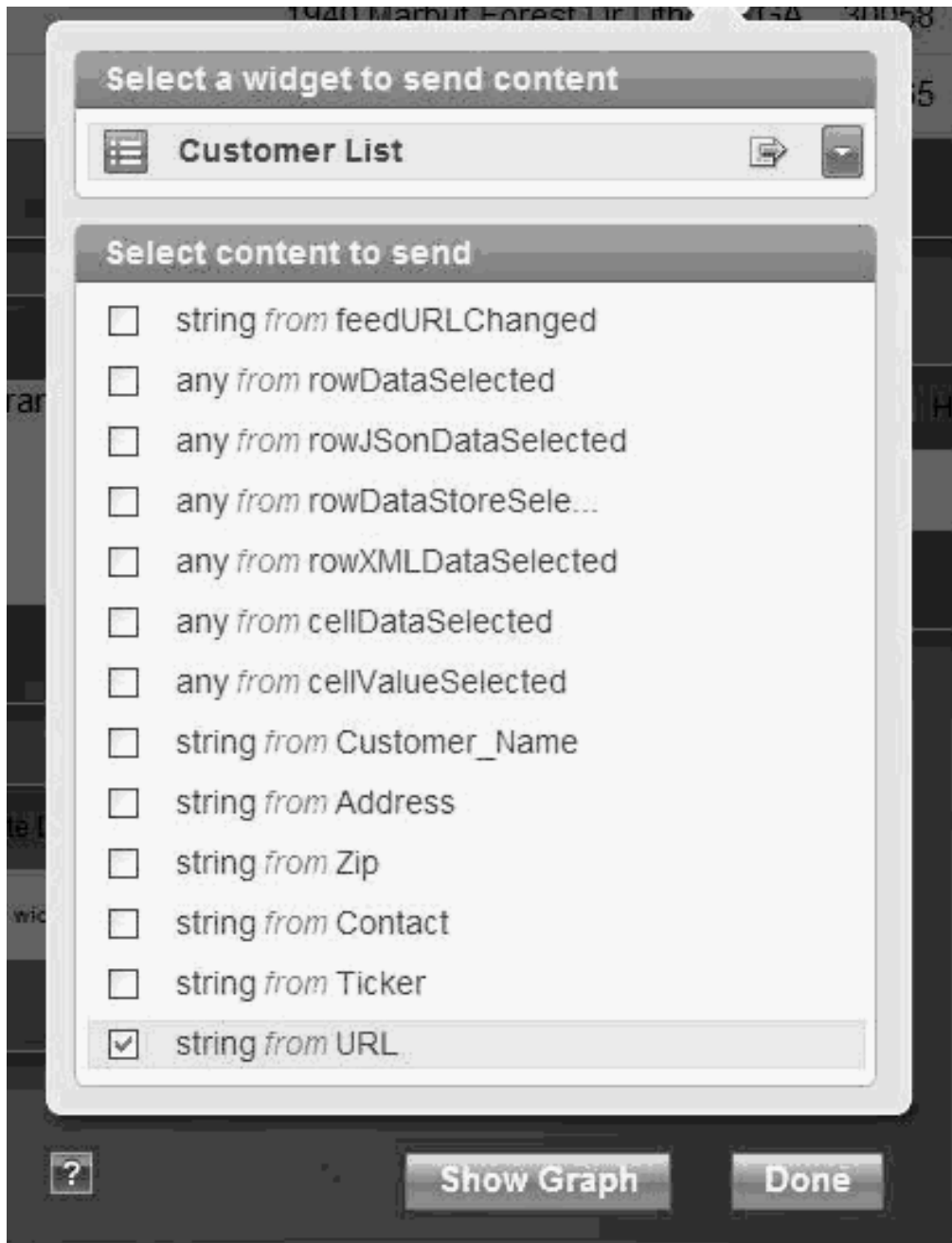
When you wire two widgets, you can start with the sending widget or the receiving widget. For example, let’s look at two widgets that Lotus Mashups provides out of the box - the **Customer List** widget and the **Web Site Displayer** widget. You can easily wire the two widgets together so that users can click a customer name in the **Customer List** widget and display the customer’s Web site in the **Web Site Displayer** widget. In the this case, the **Customer List** widget is the sending widget, and the **Web Site Displayer** widget is the receiving widget.

If you start the wiring process with the **Customer List** widget, the wiring interface look like this:



If you start the wiring process with the **Web Site Displayer** widget, the wiring interface looks like this:





What does it mean to configure widgets?

When you configure widgets, you set public properties that define the widget's characteristics. For example, you can configure widgets to point to a particular file or feed URL so that it knows where to pull data. You can configure style properties that define how the widgets should display in the mashup. Style properties include filtering and sorting information in tables, highlighting rows of data and adding titles, adding colors and images, and more. For more advanced widgets, you can create scripts to transform and convert data based on a condition that you specify. Because each widget is unique, the configuration settings vary from widget to widget.

To see some useful configuration tips for the out-of-the-box widgets shipped with Lotus Mashups, see the IBM Mashup Center wiki at <http://www-10.lotus.com/ldd/mashupswiki.nsf>.

How do I create a new widget?

The best way to create a new widget is to use the Lotus Widget Factory component of Lotus Mashups. After you create new widgets, you can add them directly to the Lotus Mashups toolbox or publish them to the catalog for others to discover and use.

Advanced users can also create and deploy widgets using some simple JavaScript and your favorite development tool. For more information about creating and deploying widgets, see the developer's corner in the IBM Mashup Center wiki at <http://www-10.lotus.com/ldd/mashupswiki.nsf>.

How can I make my data "mashable"?

Often times, companies store valuable data in personal documents and departmental sources such as spread sheets, backend databases, and various types of files. In its native form, this data cannot be integrated into a mashup because it cannot send and receive data by passing events and incurring actions.

In order to make the data mashable, you have to transform the data so it can be restructured into a format that can be consumed by other widgets. In MashupHub, you initiate this transformation by creating a feed from the data. After you create the feed, you can simply add it to Lotus Mashups so that it displays data in either the **Feed Reader** or **Data Viewer** widgets.

For detailed, step-by-step instructions about how to create a feed from a spread sheet and then add it to a mashup, see Module 3 in the *Introduction to creating mashups using IBM Mashup Center* tutorial, located in the IBM Mashup Center wiki at <http://www-10.lotus.com/ldd/mashupswiki.nsf>.

How can I use feeds in my mashups?

In Lotus Mashups, you can add widgets that display content from feeds to your mashups. In the catalog, you can create a new feed based on a variety of data sources, or you can use the feed mashup builder to create a feed mashup that consists of operators used to import feed sources and restructure the data.

I see both feeds and feed mashups in MashupHub. What's the difference between them?

In simple terms, a feed is a stream of XML data that you can display with a feed reader, and a feed mashup is a feed that you manipulate in some way. For example, you can manipulate a feed so that the data that gets displayed is filtered based on some sort of condition. In MashupHub, you create feed mashups using the feed mashup builder. The feed mashup builder includes a set of operators and functions that allow you import feed data, perform operations on the data, and then publish the outcome as a new feed. In the end, feed mashups behave the same way as feeds. You can add feeds to the catalog for others to use, tag, rate, and add comments. You can also add them to Lotus Mashups so that they display feed data in either the **Feed Reader** or **Data Viewer** widgets.

Can I add tags, comments, and ratings to widgets?

You can use the catalog to add tags, comments, and ratings to widgets. Simply find the widget in the list of widgets, open the details window, and fill in the tags, ratings, and comments.

Frequently asked questions about discovering mashups

See the following frequently asked questions and answers about discovering mashups.

- “What is the catalog, and how can I access it?”
- “How can I post mashups to the catalog?”
- “How can I add mashup pages from the catalog to Lotus Mashups?” on page 9
- “How can I add feeds from the catalog to Lotus Mashups?” on page 9

What is the catalog, and how can I access it?

The catalog is a repository for storing, sharing, discovering, and reusing mashups objects -- feeds, mashup pages, and widgets. The catalog initially contains a set of sample objects that are included with MashupHub. You can also publish your own objects in the catalog. You can then combine the objects to create pages with other mashup applications.

To open the catalog from Lotus Mashups, open the actions menu at the top of the Lotus Mashups browser and click **Open Catalog**. When MashupHub opens in a separate browser, go to the **Catalog** section.

How can I post mashups to the catalog?

You can post mashups to the catalog by publishing mashup pages. You can either publish the URL of the page on the Lotus Mashups server or you can upload the entire page definition and all its artifacts, including all the properties you have set for that page as well as all the widgets on the page, including their configurations and wiring properties.

To publish a mashup page to the catalog, do the following steps:

1. At the top of the Lotus Mashups browser, open the page menu.
2. Select **Publish this page**.
3. In the window, fill in the title, description, and version number. Also specify tags and permissions. Finally, select either of the following options:
 - **Publish page as URL** -- select this option to reference the mashup page as a fully qualified URL. No files are downloaded. When users access the page in the catalog and add it to Lotus Mashups, they will see the new entry in their page navigation that points to the server copy of the page. They will not be able to modify it. Note that they will not be able to see the page at all if you have not given them viewing permission.
 - **Publish page definition and artifacts** -- select this option to upload the mashup page package as a ZIP file. When users access the page in the catalog and add it to Lotus Mashups, the page definition and all the artifacts associated with the page, including preferences, get deployed and installed on the Lotus Mashups server. A new page node is created, and the user now have owner privileges.
4. Click **Save**.

Now confirm that you published the page correctly by tabbing over to the catalog, clicking **View More Pages** in the **Catalog** section, and finding your page in the list.

You can also post mashups to the catalog by uploading the page from the catalog itself.

How can I add mashup pages from the catalog to Lotus Mashups?

As you are building mashups, sometimes you may want to reuse and extend mashups that others have created and posted to the catalog as mashup pages. You can do this by finding mashup pages using the open search feature in Lotus Mashups.

To find and add a mashup page to your page navigation using the open search feature, do the following steps:

1. At the top right corner of the Lotus Mashups browser, click the search icon.
2. In the window, type your search criteria, and click the search icon.
3. When the search results display, click **Add to Toolbox**.
4. In the window, specify where to add the page to your page navigation. You can add it as a child page of any existing page.
5. Click **Done**. Now confirm that you successfully added the page by finding the page in your page navigation.

You can also add mashup pages to Lotus Mashups directly from the catalog.

How can I add feeds from the catalog to Lotus Mashups?

As you are building mashups, sometimes you may want to reuse and extend feeds that others have created and posted to the catalog. You can search for feeds in the catalog in a couple of different ways. First, you can use the Lotus Mashups open search feature. This allows you to search for feeds and add them to your toolbox without actually opening the catalog. Second, you can click the **Add a widget** icon in the toolbox to open the catalog and search for feeds there.

To find and add a feed to your toolbox using the open search feature, do the following steps:

1. At the top right corner of the Lotus Mashups browser, click the search icon.
2. In the window, type your search criteria, and click the search icon.
3. When the search results display, highlight the widget you want to add to Lotus Mashups.
4. Click **Add to toolbox**.
5. Specify the drawer, the widget to display the feed, and the title and description. Also select the icon that best represents the widget.
6. Click **Add**.

Now confirm that you successfully added the feed by finding it in your toolbox.

Frequently asked questions about using mashups

See the following frequently asked questions and answers about using mashups.

- “How do I access mashups that others have shared with me?” on page 10
- “How do I remove widgets that I’ve added to my mashup?” on page 10

- “What do I do if I don’t want all the widgets in my mashup to display?”
- “How can I customize the layout of my pages?”

How do I access mashups that others have shared with me?

When mashup owners share their mashups with you, you can retrieve them from the actions menu at the top of your Lotus Mashups browser, preview them, and optionally add them to your page navigation. If they have given you view access, you can only view the mashup. If they have given you editing access, you can open the page in edit mode and modify the widgets.

To access a mashup that a mashup owner has shared with you, do the following steps:

1. At the top of the Lotus Mashups browser, click the actions menu.
2. In the list, select **View More Pages**.
3. In the **More Pages** dialog box, click a page name to preview the page in a separate browser, or click **Add** to add the mashup page to your page navigation.

When you add a page, the page name displays as the last item in the top level of your page navigation. You can move it around in your page navigation just the same as you would move other pages.

How do I remove widgets that I’ve added to my mashup?

After you drag widgets onto your page, you can easily delete them afterwards. To delete a widget, simply click the menu icon at the top right corner of the widget window and select **Delete**. Note that this permanently deletes the widget as well as any wires that are connected to it.

What do I do if I don’t want all the widgets in my mashup to display?

Sometimes you will want to add widgets to your mashup but not display them on the page. For example, let’s say you simply need to convert Celsius to Fahrenheit in a data string, or perhaps you just need to transform some data using the **Data Editor**, **JavaScript Adapter**, or **Regular Expression** widgets. You will need to add those widgets to your mashup page, but you probably do not want them to display in view mode. In this case, you can easily hide the feed reader widget in the hidden widgets corral. The hidden widgets corral is an area on a page for placing widgets that you want to be available for other widgets on the page but do not want to display in the mashup. Typically, the hidden widgets corral contains nonvisual widgets that are used to provide or modify content.

To hide the widget, simply click the menu option icon at the top right corner of the widget you want to hide and select **Hide**. At that point, the widget disappears from the page. You can also drag widgets directly from the toolbox and drop them onto the hidden widgets corral icon, located on the right side of the toolbox.

How can I customize the layout of my pages?

As you build mashups, you may want to customize the layout of your page. Lotus Mashups features two main layouts -- free form and columnar. As the name suggests, a free form layout allows you to set properties for the entire canvas area, including background color, background images, page border, and page margins. It

also lets you specify which skin you want to use as the default skin for widgets. A column layout allows you to configure all those same properties but also properties for columns to your page. When you add columns, you can select the number of columns to display on the page (three is the maximum), specify the width between columns, and set column background colors and borders.

To switch between the two layouts, open the page menu and select either **FreeFrom Layout** or **Column Layout** in the **Layout** field. To set properties for each layout, select the layout icon on the right side of the toolbox and set properties as desired. Be sure to save your page so you don't lose your changes.

Frequently asked questions about sharing mashups

See the following frequently asked questions and answers about sharing mashups.

- "How do I share mashups with my co-workers? "

How do I share mashups with my co-workers?

You can share mashups with both individual users as well as groups of users in your company. When you share a mashup, you share the page that contains the mashup. When users you have shared the page with open Lotus Mashups, they can choose whether or not to add that page to their navigation. You can give those users either viewing or editing access. If they have viewing access, they can only view the mashup. If they have editing access, they can add, delete, configure, and wire widgets. However, they cannot share the mashup page with others since they are not the owner.

To share a mashup, do the following steps:

1. At the top of the Lotus Mashups browser, open the page menu.
2. Select **Share this page**.
3. In the **Access Level** window, use the search field to add individual users and groups to the **Search Results** list (this list appears after you click the search button).
4. In the **Search Results** list, select the check boxes beside the individuals and groups with whom you want to share your mashup.
5. Click **Add to View** to give the selected users view access, and click **Add to Edit** to give the selected users edit access.

After you add users and groups to lists, you can select and clear the check boxes as desired to provide and remove access.

Glossary of terms

General

actions menu

The actions menu is a list of options located at the top of the Lotus Mashups browser in edit mode. You can switch between edit and view mode, view the page source code, open the catalog, and see a list of pages that others have shared with you.

Asynchronous JavaScript and XML (AJAX)

AJAX is a group of technologies used to create dynamic, interactive Web pages that respond quickly to requests through the exchange of smaller chunks of data. AJAX uses a combination of existing technologies and

protocols including XHTML, CSS, XML, client-side scripting languages such as JavaScript, Document Object Model, and an asynchronous data retrieval mechanism such as XMLHttpRequest.

Atom Atom is an XML-based format for syndicated Web content and a protocol for editing and publishing Web resources that is based on the Atom Specification Format.

catalog

The catalog is a common repository for sharing and discovering widgets, feeds, and mashup pages, with built-in community features like ratings, tagging, and commenting.

CSV file

A comma-separated value (CSV) text file, commonly used to exchange files between database systems that use different formats. Sometimes called comma-delimited files.

drawer

In Lotus Mashups Workshop, in edit mode, a drawer is a category of widgets in the toolbox. As you create mashups, you drag widgets directly onto pages from drawers. You can move widgets from drawer to drawer, change the names of drawers, and more.

edit mode

In Lotus Mashups Workshop, edit mode is a page state in which you can assemble, configure, and wire widgets into mashups. In edit mode, you can add and delete widgets from pages and also edit settings for content and style. Edit mode is available only to users who are members of the edit role in access control.

feed A feed is a data format that allows Web sites to distribute frequently updated content to users. In Lotus Mashups, you can create widgets that display content from feeds. Feeds can be of various formats, including Atom Syndication Format and Really Simple Syndication (RSS).

hidden widgets corral

In Lotus Mashups Workshop, in edit mode, the hidden widgets corral is an area on a page for placing widgets that you want to be available for other widgets on the page but do not want to display in the mashup. Typically, the hidden widgets corral contains nonvisual widgets that are used to provide or modify content, for example a feed that provides content on a map.

IBM InfoSphere MashupHub

MashupHub is a lightweight information management environment for IT professionals who want to unlock and share Web, departmental, personal, and enterprise information in REST-style Web2.0 applications. MashupHub includes visual tools for restructuring and remixing REST-style feeds.

IBM Mashup Center

Mashup Center is a product offering that provides a complete, end-to-end mashup platform for line-of-business users who want to assemble single, flexible, and dynamic Web applications -- with the management, security, and governance capabilities that IT requires. Mashup Center includes Lotus Mashups and MashupHub.

IBM Lotus Mashups

Lotus Mashups is a lightweight mashup environment for rapidly assembling Internet, enterprise, and personal content into simple, flexible,

and dynamic Web applications. With Lotus Mashups, Web-savvy business users can easily create and share new Web applications that address their immediate business needs.

Lotus Mashups includes the following components:

- **Lotus Mashups Workshop:** A graphical, browser-based tool for assembling widgets and feeds into new mashups
- **Lotus Mashups Catalog:** A common repository for sharing and discovering widgets and feeds, with built-in community features like ratings, tagging, commenting
- **Lotus Widget Factory:** An Eclipse-based development tool for building widgets quickly

IBM Lotus Widget Factory

Lotus Widget Factory is an easy-to-use development environment that enables developers of all skill levels to rapidly create dynamic widgets that leverage existing applications and data sources without writing code. Lotus Widget Factory's ease of use and advanced development features dramatically streamline the widget development process, helping developers to deliver adaptive, robust widgets in a fraction of the time and at a fraction of the cost required using traditional application development methods.

iWidget

iWidget is an IBM specification that provides a standard definition for a widget, allowing for seamless interoperability across various IBM platforms and products. IBM is working with groups like the OpenAjax Alliance to drive toward a common widget standard, and to ensure interoperability between widget formats like widgets and Google Gadgets.

JavaScript

JavaScript is a Web scripting language that is used in both browsers and Web servers.

JavaScript Object Notation (JSON)

JSON is a lightweight data-interchange format that is based on the object-literal notation of JavaScript. JSON is programming-language neutral but uses conventions from languages that include C, C++, C#, Java™, JavaScript, Perl, Python.

mashup

A mashup is a lightweight Web application created by combining information or capabilities from more than one existing source to deliver new functions and insights. Mashups typically mash data either to create a new data source or a new application that presents data in a single graphical interface. In a business environment, a mashup typically combines enterprise and Web-based data from an assembly of widgets into a single, dynamic application to address a specific situation or problem.

Open search feature

The open search feature is a search mechanism in the Lotus Mashups toolbox that you can use to search for pages, widgets, and feeds in the catalog. When you locate items in the catalog, you can add them to Lotus Mashups, edit them, remix them with other data, and republish them to the catalog.

page In Lotus Mashups Workshop, a page is the canvas area on which you view, create, and edit mashups. In edit mode, you can customize page layouts to achieve a unique look for your mashups.

page menu

The page menu is the list of page options that display directly beside the name of the current page at the top of the Lotus Mashups browser. You can use the page menu to share pages with others, publish pages to the catalog, edit page properties, and delete pages.

toolbox

In Lotus Mashups Workshop, in edit mode, the toolbox is the area that contains drawers of widgets. You can add new widgets to the toolbox and organize them to meet your needs. From the toolbox, you can drag widgets into the hidden widgets corral and also change the page layout.

view mode

In Lotus Mashups Workshop, view mode is a page state in which you can view and use mashups but cannot edit them.

widget

A widget is a small, portable application or piece of dynamic content that can easily be placed into a Web page or an embedded browser within a rich client. Widgets can be written in any language (Java, .NET, PHP, and more) or can be a simple HTML fragment. Widgets that pass events can be wired together to create mashups. Widgets are called different names by different vendors, for example gadgets, blocks, and flakes.

You can create widgets with a variety of tools, including Eclipse, IBM WebSphere sMash, or even Notepad. To ease the widget creation and deployment process, Lotus Mashups includes Lotus Widget Factory, an Eclipse-based rapid widget creation environment.

wiring graph

In Lotus Mashups Workshop, in edit mode, the wiring graph is a diagram that shows graphically how the selected widget is wired to other widgets on the page. The wiring graph provides an easy way to confirm which widgets are successfully wired together on the page.