# K

# Mashups

## K.1 Introduction

Building web application mashups is one of the signature topics of Web 2.0. The term mashup originated in the music world—a music mashup is a remix of two or more songs to create a new song. You can listen to some music mashups at www.ccmixter.org/. A web application mashup combines complementary functionality, usually accessed via web services (Chapter 31) and RSS feeds (www.deitel.com/rss and www.rssbus.com) from multiple websites. You can create innovative and powerful Web 2.0 mashup applications much faster than if you have to write your applications from scratch. For example, www.housingmaps.com combines Craigslist apartment listings with Google Maps to display on a map all of the apartments for rent in a neighborhood.

## K.2 Popular Mashups

Figure K.1 shows some popular mashups.

| URL | APIs | Description |
|---|---|---|
| *Popular Google Maps Mashups:* | | |
| www.mappr.com/ | Google Maps, FlickR | Find photos of sites across the US. |
| www.housingmaps.com/ | Google Maps, Craigslist | Find available apartments and homes by neighborhood. Includes prices, pictures, the address and rental-agent contact information. |
| www.shackprices.com/ | Google Maps | Find the approximate value of your home based on recent home sales in your area. |

**Fig. K.1** | Popular mashups. (Part 1 of 2.)

| URL | APIs | Description |
|---|---|---|
| *Other Popular Mashups:* | | |
| www.doubletrust.net | Yahoo! Search, Google Search | Combines Yahoo! and Google search results into one page. |
| www.csthota.com/geotagr | Microsoft Virtual Earth | Store and browse photos by geographic location. |
| www.kokogiak.com/ amazon4/default.asp | Amazon Web Services | Add Amazon items to your wish list, put the link to a book into your blog on Blogger, add a link to your del.icio.us bookmarks or look for the book in your local library. |

**Fig. K.1** | Popular mashups. (Part 2 of 2.)

Now that you've read most of *Java How to Program, 8/e*, you're probably familiar with API categories including graphics, GUI, collections, multimedia, databases and many more. Nearly all of these provide enhanced *computing functionality*. Many web services APIs provide *business functionality*—eBay provides auction capabilities, Amazon provides book sales (and sales of other types of products, such as CDs, DVDs, electronic devices, and more), Google provides search capabilities, PayPal provides payment services, etc. These web services are typically free for non-commercial use; some impose (generally reasonable) fees for commercial use. This creates exciting possibilities for people building Internet-based applications and businesses.

## K.3  APIs Commonly Used in Mashups

We've emphasized the importance of software reuse. Mashups are yet another form of software reuse that saves you time, money and effort—you can rapidly prototype starter versions of your applications, integrate business functionality, integrate search functionality and more. Figure K.2 shows some APIs commonly used in mashups.

| API source | URL | Functionality |
|---|---|---|
| Google Maps | www.google.com/apis/maps/ | Maps |
| Yahoo! Maps | developer.yahoo.net/maps/ | Maps |
| Microsoft Virtual Earth | dev.live.com/Virtualearth/sdk/ | Local search, maps |
| Amazon | aws.amazon.com/ | E-commerce |
| TypePad ATOM | www.sixapart.com/pronet/ docs/typepad_atom_api | Blogging |
| Blogger ATOM feed | code.blogspot.com/ | Blogging |
| Flickr | developer.yahoo.net/ flickr/index.html | Photo sharing |
| YouTube | www.youtube.com/dev | Video sharing |

**Fig. K.2** | APIs commonly used to make mashups. (Part 1 of 2.)

| API source | URL | Functionality |
|---|---|---|
| PayPal | `developer.paypal.com/` | Payments |
| del.icio.us | `del.icio.us/help/api/` | Social bookmarking |
| Backpack | `backpackit.com/` | Event scheduling |
| Dropcash | `www.dropcash.com/` | Fundraising organizer |
| Upcoming.org | `upcoming.org/services/api/` | Syndicate event listings |
| Google AdWords | `code.google.com/apis/adwords/` | Manage Google AdWords advertising programs |
| eBay | `developer.ebay.com/common/api` | Auctions |
| SalesForce | `developer.salesforce.com` | Customer Relationship Management (CRM) |

**Fig. K.2** | APIs commonly used to make mashups. (Part 2 of 2.)

## K.4 Deitel Mashups Research Center

Our Mashups Resource Center, which is located at

`www.deitel.com/mashups/`

focuses on the enormous amount of free mashup content available online. You'll find tutorials, articles, documentation, the latest books, articles, blogs, directories, tools, forums, etc., that will help you quickly develop mashup applications.

- Check out the newest and most popular mashups, including scores of Google Maps-based mashups showing you the locations of theaters, real estate for sale or rent, properties that have sold in your area, and even the locations of the public restrooms in San Francisco!
- Search ProgrammableWeb for mashups by category.
- Check out the Flickr APIs for adding photos to your applications, updating photos, replacing photos, example requests, and asynchronous uploading.
- Check out the article: "Building Mashups for Non-Programmers."
- Check out the Smashforce tool that enables Salesforce.com users to mashup applications such as Google Maps with their Multiforce and Sforce enterprise applications.
- Find mashup sites such as ProgrammableWeb, Givezilla, Podbop, and Strmz.
- Check out IBM's Enterprise Mashup Tool.
- Check out the search and mapping APIs from Microsoft, Yahoo! and Google that you can use in your mashup applications.
- Use Technorati APIs to find all of the blogs that link to a specific website, search blogs for mentions of keywords, see which blogs are linked to a given blog and find blogs associated with a specific website.
- Use the Backpack API to help organize tasks and events, plan your schedule, collaborate with others, monitor your competitors online and more.

## K.5 Deitel RSS Resource Center

RSS feeds are also popular information sources for mashups. To learn more about RSS feeds, visit our RSS Resource Center at `www.deitel.com/RSS/`. Each week, we announce the latest Resource Center(s) in our free e-mail newsletter, the *Deitel*® *Buzz Online*:

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www.deitel.com/newsletter/subscribe.html
```

Please send suggestions for additional Resource Centers and improvements to existing Resource Centers to `deitel@deitel.com`. Thanks!

## K.6 Mashup Performance and Reliability Issues

There are several challenges when creating mashup applications. Your applications become susceptible to traffic and reliability problems on the Internet—circumstances generally beyond your control. Companies might suddenly change APIs that your applications use. Your application is dependent on hardware and software capabilities of other companies. Also, companies could impose fee structures on previously free web services or could increase existing fees.