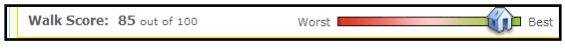
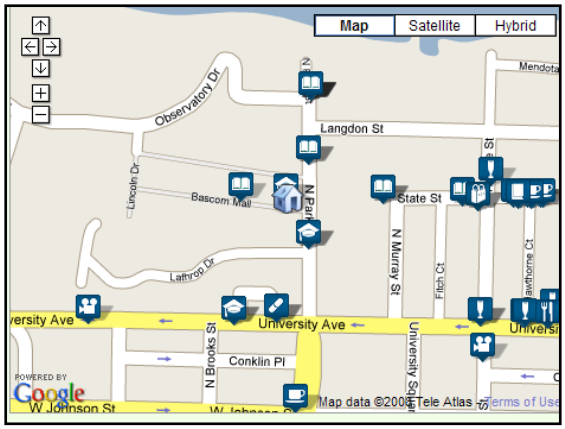
URPL 590 - Contemporary Topics in Urban and Regional Planning: Mapping Mashups





Spring 2009 – 2 credits
10 weeks – (February 24 to May 7)

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Tuesday, 2:30 to 3:45 pm
Thursday, 2:30 to 4:15 pm

Lecture: 208 Old Music Hall
Lab: 109 Old Music Hall (URPL Computer Lab)

Course Website: http://maps.aqua.wisc.edu/urpl590-spring09/mashups/index.htm

Course Summary

Creation of geospatial data is accelerating at a rapid pace. Increasingly, these geospatial data are being made accessible on-line as web services. Innovative organizations have begun to integrate these web services and develop web mapping applications that can be used for a variety of purposes. An example is Walk Score (http://www.walkscore.com/) that lets the user calculate the "walkability" of their neighborhood along with a listing of the closest business in a variety of categories. Recently, software has been developed that lets people without extensive computer programming skills develop mapping applications that pull data from multiple distributed sources. These applications are referred to as "mapping mashups." This course will nurture an understanding of the mashup phenomenon and provide "hands-on" experience on the use of Google Maps, Google Earth, and selected open source tools to develop web mapping applications.

Prerequisites

This is an intermediate-level course. An introductory course in GIS or cartography is recommended.

Course Goals

- Develop a better understand of the mapping mashup phenomenon
- Gain hands-on experience with software tools to develop web mapping applications
- Learn to effectively communicate the benefits of mapping mashups to society
- Build and promote a mapping mashup that has benefits to society
- Utilize technology that promotes collaboration
- Learn to work effectively in a group setting
- Sharpen writing skills directed at a professional audience

Assignments

- Discover an innovative mashup, share your findings with the class, and build a gallery so others can benefit from your discovery. Prepare a summary and evaluation of the mashup that will be posted on the course web site.
- Develop a tutorial to show others how to use a software tool necessary to build a mapping mashup related to the Great Lakes.
- Work as part of a group to develop a working mapping mashup. The product will be communicated through both a report and presentation. Links to the mashup along with a description and documentation will be posted on the course web site.

Book (recommended, not required)

- Sherman, Gary. 2008. Desktop GIS: Mapping the Planet with Open Source. Pragmatic Bookshelf.

Course Library (resource books that will be available at the URPL Computer Lab)

- Udell, Sterling. 2009. Beginning Google Map Mashups with Mapplets, KML, and GeoRSS – From Novice to Professional. Apress.
- Wernecke, Josie. 2009. The KML Handbook: Geographic Visualization for the Web. Addison-Wesley.
- Young, Michael. 2008. Google Maps Mashups with Google Mapplets. Firstpress.
- Gibson, Rich and Schuyler Erle. 2006. Google Maps Hacks: Tips & Tools for Geographic Searching and Remixing. O'Reilly Media.
- Purvis, Michael, Jeffrey Sambells, and Cameron Turner. 2006. Beginning Google Maps Application with PHP and Ajax: From Novice to Professional. Apress.
- Erle, Schuyler, Rich Gibson, and Jo Walsh. 2005. Mapping Hacks: Tips & Tools for Electronic Cartography. O'Reilly.
- Kropla, Bill. 2005. Beginning MapServer: Open Source GIS Development. Apress.

Other Readings

Books

- Yee, Raymond. 2008. Pro Web 2.0 Mashups: Remixing Data and Web Services. Apress.
- Griffin, Eric. 2008. Foundations of Popfly: Rapid Mashup Development. Apress.
- Lewis, Andre, Michael Purvis, Jeffrey Sambells, and Cameron Turner. 2007. Beginning Google Maps Applications with Rails and Ajax: From Novice to Professional. Apress.
- Davis, Scott. 2007. GIS for Web Developers: Adding 'Where' to Your Web Applications. Pragmatic Bookshelf.
- Crowder, David A. 2007. Google Earth for Dummies. Indianapolis: Wiley Publishing, Inc.
- Scharl, A. and K. Tochtermann (Eds). 2007. The Geospatial Web – How GeoBrowsers, Social Software, and the Web 2.0 are Shaping the Network Society. London: Springer.
- Turner, Andrew. 2006. Introduction to Neogeography. O'Reilly Short Cuts.
- Brown, Martin C. 2006. Hacking Google Maps and Earth. Indianapolis: Wiley Publishing, Inc.

Journal Articles

- Drummond, William J. and Stephen P. French. 2008. "The Future of GIS in Planning: Converging Technologies and Diverging Interests" Journal of the American Planning Association. Vol. 74, No. 2 (Spring 2008). pp. 161-174.
- Klosterman, Richard E. 2008. "Comment on Drummond and French: Another View of the Future of GIS" Journal of the American Planning Association. Vol. 74, No. 2 (Spring 2008). pp. 174-176.
- Ferriera, Joseph, Jr. 2008. "Comment on Drummond and French: GIS Evolution: Are We Messed Up by Mashups?" Journal of the American Planning Association. Vol. 74, No. 2 (Spring 2008). pp. 177-179.
- Budhathoki, Nama Raj, Bertram (Chip) Bruce, and Zorica Nedovic-Budic. 2008. "Reconceptualizing the role of the user of spatial data infrastructure" GeoJournal. Vol 72, pp149–160.
- Goodchild, M.F. 2007. "Citizens as voluntary sensors: spatial data infrastructure in the world of Web 2.0" International Journal of Spatial Data Infrastructures Research. Vol. 2, pp 24–32.
- Pietroniro, Elise and Darlene Fichter. 2007. Map Mashups and the Rise of Amatuer Cartographers and Mapmakers. ACMLA Bulletin. No. 127, pp. 26-30
- Kulathuramaiyer, Narayanan. 2007. "Mashups: Emerging Application Development Paradigm for a Digital Journal" Journal of Universal Computer Science. Vol. 13, No. 4, pp 531-542.

Blogs/Websites
Programmable Web
http://www.programmableweb.com/

Mashup Feed
http://www.mashupfeed.com/

Clever Elephant – Paul Ramsey
http://blog.cleverelephant.ca/

Very Spatial
http://veryspatial.com/

High Earth Orbit – Andrew Turner
http://highearthorbit.com/

Mashup Guide – Raymond Yee
http://blog.mashupguide.net/

Mashable
http://mashable.com/

Volunteered Geographic Information, Workshop, 2007
http://www.ncgia.ucsb.edu/projects/vgi/

Mashup Development Resources
Making Google Maps: A comprehensive guide for creating and using your own online Google Maps – Devlin Hughes and Brett Jackson, Trinity College
http://prog.trincoll.edu/gis/documents/Google_Mashup_User_Guide.pdf

Grading/Assignments
Mashup Gallery Presentation – 3/3 (10%)
Mashup Evaluation – due 3/6 (15%)
Mashup Tutorial – due 4/3 (25%)
Mashup Project Presentation – 5/7 (15%)
Mashup Project Report – due 5/7 (35%)

Course Schedule

Week 6

LECTURE - Tuesday, February 24th	Course Overview, Introductions, Technologies at UW-Madison that support collaboration (Jeff Bohrer and John Thomson, DoIT)
LECTURE - Thursday, February 26th	Overview of mashups – part 1 (AJ)

Week 7

LECTURE - Tuesday, March 3rd	Overview of mashups – part 2 (AJ)
PRESENTATIONS - Thursday, March 5th	Mashup Gallery – presentations Assignment: Mashup Evaluation (blog entry) due 3/5

Week 8

LAB - Tuesday, March 10th	Overview of Great Lakes data/services Mashup software resources Demos of GeoCommons, KML, Google Maps API, and OpenLayers
LAB - Thursday, March 12th	Mashup Tutorial work session

Week 9 – Week of March 16th

	SPRING BREAK
	SPRING BREAK

Week 10

DISCUSSION - Tuesday, March 24th	Share ideas about mashup methods
LAB - Thursday, March 26th	Mashup Tutorial work session

Week 11

LAB - Tuesday, March 31st	Mashup Tutorial work session
LAB - Thursday, April 2nd	Mashup Tutorial work session Mashup tutorial due 4/3

Week 12

LAB - Tuesday, April 7th	Mashup Project scoping
LAB - Thursday, April 9th	Project work time (Technical assistance from outside experts arranged as needed) Mashup project plan due

Week 13

LAB - Tuesday, April 14th	Project work time
LAB - Thursday, April 16th	Project work time

Week 14

DISCUSSION - Tuesday, April 21st	Mid project check-in/share techniques
LAB - Thursday, April 23rd	Project work time

Week 15

LAB - Tuesday, April 28th	Project work time
LAB - Thursday, April 30th	Project work time

Week 16

LAB - Tuesday, May 5th	Project work time
PRESENTATIONS - Thursday, May 7th	Project Presentations Project paper due

Revised – February 24, 2009