Geospatial Collaboration:
New Common Ground

Co-sponsored by
metaLAB(at)Harvard and
Center for Geographic Analysis, Institute for Quantitative Social Science

Date: May 6-7, 2011

Location: Tsai Auditorium, CGIS Building South, Room S010
Address: 1730 Cambridge St., Cambridge, MA 02138

The way we map is changing the way we work. Geospatial technology weaves its way into our daily lives and work flows as never before, and as mapping moves from the desktop to the web, an explosion of innovation is expanding the base, not only of map users but also of map makers, to include just about anyone with an internet connection.

The dazzling speed of development in mapping hints at the potential yet to be realized, while at the same time current technologies are becoming indispensable. From drivers finding best routes through traffic and emergency responders using dynamic situation maps, to villagers and citizens empowered by local mapping efforts and shared access to digital documents, the consumers and creators of online maps are also creating new channels of communication and pioneering new ways of interacting with the physical environment, and with each other.

This two-day conference will bring web-mapping experts from across the country to Harvard to share their knowledge and experience, and to envision what lies ahead. Speakers will introduce ideas, systems, tools, and visions, and present case studies and discuss challenges. Some will offer live demos and hands-on training. This conference provides a forum for geospatial technologists, developers, academics and end users to engage in dialog and help shape the future of geospatial technology on the Internet.

Key Question: What are current opportunities for, and barriers to, as well as notable examples of, open geospatial collaboration?

Friday, May 6, 2011	Plenary Sessions
Live broadcast URL:	http://video2.harvard.edu/livevideo/cga_spring_conference

8:00 AM - 8:30 AM	Registration and Breakfast outside Tsai Auditorium

8:30 AM - 9:00 AM	Opening Session I:	*Moderator: Peter Bol*

Welcome and Introductions
Peter Bol & Jeffrey Schnapp
Keynote Address
Chris Holmes

9:00 AM - 10:20 AM	Presentation Session I:	*Moderator: Stephen Ervin*

The Senseable City
Carlo Ratti
Using GIS to understand the rise and fall of social order in post-invasion Iraq.
David Patel
Community-based approaches to high-resolution multispectral imaging with balloons
Jeffrey Warren
extraMUROS (archives across walls)
*Jeffrey Schnapp and Robert G. Pietrushko*

10:20 AM - 10:35 AM	Coffee Break

10:35 AM - 12:15 PM	Presentation Session II:	*Moderator: Micah Altman*

Developing a Multi-agency GIS-based Land Management System
Phil Griffiths
Location-Based Civic Innovation
Nigel Jacob
Collaborations on Open Geo-Software and Open Geo-Data
Bibiana McHugh
Geospatial Collaboration with GeoNode
Sebastian Benthall
Mapping a Media Archaeology of Place: Archives, Databases and Locative Media
Jesse Shapins

12:15 PM - 1:15 PM	Lunch Break

Center for
Geographic Analysis

Harvard University
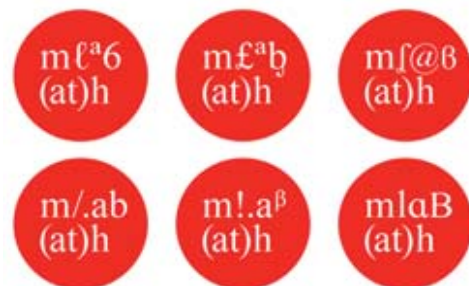
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Friday, May 6, 2011   **Plenary Sessions**

Live broadcast URL: **http://video2.harvard.edu/livevideo/cga_spring_conference**

1:15 PM - 2:45 PM   **Lightning Talk Session I:**   *Moderator: Paul Cote*

Collaborative Analytics to enable Open Conversations and Knowledge Sharing
Andrew Turner
Between Social Media and GIS: Mapping Revolutions, History, and Catastrophe
Todd Presner, Yoh Kawano
Live Editing Your Map with OpenStreetMap on MapQuest
Patrick McDevitt
Open Access to Web Mapping Services (Don't Feed Me – Teach Me To Fish)
Christian Jacqz
Using A GeoDjango, MongoDB, Solr and HTML5 Stack to Lazily Geo-Reference Government Data
Dan Yamins
A GIS approach to evolving and leveraging online geospatial communities
Bernard Szukalski
Social Explorer
Andy Beveridge
BioMosaic: mapping the intersection of migration, demography and disease
David Scales
Web Maps in a Data Portal: The Case of the CPE Historical Urban Ecology Database
Brian Bettenhausen

2:45 PM - 3:00 PM   **Coffee Break**

3:00 PM - 4:30 PM   **Lightning Talk Session II:**   *Moderator: George Planansky*

WorldMap
Ben Lewis
GeoData@Tufts: The OpenGeoportal
Patrick Florance, Stephen McDonald, Chris Barnett
Digital Atlas of Roman and Medieval Civilizations
Guoping Huang
Spatial Intelligence with Demographic and Economic Information of China
Shuming Bao
GIS Web Application for Living Plant Collection Research
Brian Morgan
DistrictBuilder: An Open Source Web Based Redistricting Application
Micah Altman
GIS at MIT
Lisa Sweeney
GIS Web Applications in Africa
Suzanne Preston Blier

4:30 PM - 5:30 PM   **Poster and Reception, outside Tsai Auditorium**
Vote for the Best Poster and Best Video on display

Saturday, May 7	CGIS South Building, 1730 Cambridge St.		
Concurrent Sessions	Room S010 Moderator: Jeff Blossom	Room S153 Moderator: Molly Groome	Room S250 Moderator: Giovanni Zambotti
9:00 - 10:00 AM	*Patrick McDevit:* Live Editing Your Map with OpenStreet-Map on MapQuest	*Todd Presner, Yoh Kawano:* Between Social Media and GIS: Mapping Revolutions, History, and Catastrophe	*Brian Bettenhausen:* Web Maps in a Data Portal: The Case of the CPE Historical Urban Ecology Database
10:00 - 11:00 AM	*Bibiana McHugh:* Collaborations on Open Geo-Software and Open Geo-Data	*Andrew Turner:* Collaborative Analytics to enable Open Conversations and Knowledge Sharing	*Guoping Huang:* Digital Atlas of Roman and Medieval Civilizations
11:00 AM - 12:00 PM	*Jeff Blossom:* A Sampler of Harvard Web Mapping Projects	*Bernard Szukalski:* A GIS approach to evolving and leveraging online geospatial communities	*Andy Anderson:* Cityscapes
12:00 - 1:00 PM	*Award ceremony and Lunch Break in Tsai Auditorium, CGIS South Building*		
1:00 - 2:00 PM	*Patrick McDevit:* Live Editing Your Map with OpenStreet-Map on MapQuest	*Todd Presner, Yoh Kawano:* Between Social Media and GIS: Mapping Revolutions, History, and Catastrophe	*Brian Bettenhausen:* Web Maps in a Data Portal: The Case of the CPE Historical Urban Ecology Database
2:00 - 3:00 PM	*Bibiana McHugh:* Collaborations on Open Geo-Software and Open Geo-Data	*Andrew Turner:* Collaborative Analytics to enable Open Conversations and Knowledge Sharing	*Guoping Huang:* Digital Atlas of Roman and Medieval Civilizations
3:00 - 4:00 PM	*Jeff Blossom:* A Sampler of Harvard Web Mapping Projects	*Bernard Szukalski:* A GIS approach to evolving and leveraging online geospatial communities	*Andy Anderson:* Cityscapes

	CGIS Knafel Building, 1737 Cambridge St.		Science Center, 1 Oxford St.
Room S354 Moderator: Lex Berman	Room K354 Moderator: Sumeeta Srinivasan	Room K050 Modeator: Wendy Guan	Room B-09 Moderator: Matt Bertrand
David Scales: BioMosaic: mapping the intersection of migration, demography and disease	*Micah Altman:* DistrictBuilder: An Open Source Web Based Redistricting Application	*Liz Barry, Jeffrey Warren:* How to make your own aerial imagery for $100	*Ben Lewis, Suzanne Blier:* WorldMap training
Andy Beveridge: Social Explorer	*Brian Morgan:* GIS Web Application for Living Plant Collection Research		
Shuming Bao: China Geo-Explorer	*Patrick Florance, Stephen Mc-Donald, Chris Barnett:* GeoData@Tufts: Tufts Open Geoportal		
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Shuming Bao: China Geo-Explorer	*Patrick Florance, Stephen Mc-Donald, Chris Barnett:* GeoData@Tufts: Tufts Open Geoportal		

Keynote Address
Chris Holmes

Abstract: The keynote address will present a high level overview of the brief history, current status, and future perspective of the dynamics in geospatial collaboration.

Chris Holmes was a lead developer of GeoServer in OpenPlans from 2002 to 2005, and became its Managing Director in 2006. He grew the geospatial division of OpenPlans into OpenGeo, and is currently serving as its President. Between 2005 and 2006, he pursued a Fulbright Scholarship in Zambia to examine the potential for Open Source Geospatial software to implement Spatial Data Infrastructures in developing countries. Chris has served on the Project Management Committee of GeoTools, the most advanced Open Source Java toolkit, and is now the chair of the Project Steering Committee of GeoServer. He was additionally a founding board member to the Open Source Geospatial (OSGeo) Foundation, which is giving diverse spatially oriented projects a common banner. He currently sits on the boards of the Global Spatial Data Infrastructure Association (GSDI) and Brave New Software. See http://opengeo.org/about/team/chris.holmes/ for more.

The Senseable City
Carlo Ratti

Abstract: The real-time city is now real! The increasing deployment of sensors and hand-held electronics in recent years is allowing a new approach to the study of the built environment. The way we describe and understand cities is being radically transformed - alongside the tools we use to design them and impact on their physical structure.

Carlo F. Ratti (born 1971) is an Italian architect and engineer who practices in Torino, Italy, and teaches at the Massachusetts Institute of Technology (MIT), USA, where he directs the MIT Senseable City Lab. Ratti has authored over 200 academic papers.

Using GIS to understand the rise and fall of social order in post-invasion Iraq.
David Patel

Abstract: After the overthrow of the Takriti Baath regime in April 2003, the provision of public goods by the Iraqi state ceased and did not quickly restart. Iraqis in some areas, however, were able to substitute for the state by cooperating with their neighbors to patrol streets, clear drainage ditches, and punish looters. In my book manuscript, I examine how and why Iraqi Arabs relied on Friday mosque sermons to guide these forms of cooperation, how multiple mosques in a locality could hinder cooperation, and why sectarianism was an inadvertent local byproduct of mosque-based social order. In this presentation, I will focus on how I use spatial data and GIS analysis to test several observable implications of my central argument. For example, I analyze whether murders in Basra were more likely to occur in the "catchment area" of a single mosque or in multiple mosques' overlapping areas. I will describe how I use GIS to explore relationships between the location of Sunni and Shiiite mosques in Baghdad and patterns of sectarian violence and cleansing.

David Siddhartha Patel is an Assistant Professor in the Department of Government at Cornell University. He teaches courses on Middle Eastern politics, Islamic politics, and research design. In 2003-2004, Patel conducted independent field research in Iraq on the role of mosques and clerical networks in generating social order. He is currently completing a book manuscript tentatively titled Ayatollahs on the Pareto Frontier: Islam and Social Order in Iraq. Patel received his B.A. from Duke University in economics and political science and his Ph.D. from Stanford University in political science.

Community-based approaches to high-resolution multispectral imaging with balloons
Jeffrey Warren

Abstract: In the past year, a growing grassroots community of mapmakers has produced many high resolution maps using inexpensive cameras attached to balloons or kites. Subjects have included time-sensitive scenes such as environmental contamination due to the BP oil spill and wastewater flows in Brooklyn's Gowanus canal -- collected in most cases by local residents and activists without GIS or formal training in mapmaking techniques.

Jeffrey Warren: Founder of Grassroots Mapping and co-founder of Public Laboratory, Jeffrey Warren makes maps and citizen science tools at pirateship in Somerville, MA, and is a research affiliate of MIT's Center for Future Civic Media. Jeff teaches with the Environmental Justice research group at the Rhode Island School of Design, and is the creator of Cartagen, an open-source HTML5 vector mapping framework. He has founded or co-founded various organizations, including Vestal Design, a multidisciplinary design firm, Cut&Paste Labs, a Lima, Peru-based school for open-source programming, Weardrobe.com, and Paydici Inc. Jeff holds an MS from MIT's Media Lab, and a BA in Architecture from Yale University, where he worked with artist/technologist Natalie Jeremijenko, building robotic dogs and geese. He likes to draw.

extraMUROS (archives across walls)
Jeffrey Schnapp and Robert G. Pietrushko

Abstract: I will be presenting one of metaLAB(at)Harvard's projects in progress: an open-source HTML5 infrastructure built on public APIs that enables faculty, students, staff and the general public to view, annotate, and remix Harvard-owned digital multimedia collections and to interconnect them with other high-quality digital repositories across the web. The scale and complexity of such multimedia repositories presuppose the development of a nimble geospatial navigational interface able to accommodate a range of user scenarios. My presentation will concern the role of maps in the design

of interfaces of this kind.

Jeffrey Schnapp: Before moving to Harvard in 2011, Jeffrey T. Schnapp occupied the Pierotti Chair of Italian Studies at Stanford, where he founded the Stanford Humanities Lab in 2000. A cultural historian with research interests extending from antiquity to the present, his most recent books are Speed Limitsand The Electric Information Age Book (forthcoming). His pioneering work in the domain of digitally augmented approaches to cultural programming has included curatorial collaborations with the Triennale di Milano, the Cantor Center for the Visual Arts, the Wolfsonian-FIU, and the Canadian Center for Architecture. His Trento Tunnels project — a 6000 sq. meter pair of highway tunnels in Northern Italy repurposed as a history museum– was featured in the Italian pavilion of the 2010 Venice Biennale. He is Professor of Romance Languages & Literatures and also on the faculty at the Graduate School of Design.

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Robert Gerard Pietrusko is an engineer-designer focusing on the relationship between contemporary technology and spatial products. His work has been exhibited at the SF MoMA, The Venice Architecture Biennale, and The Foundation Cartier, among others, and has been featured in Metropolis, Architectural Record, and Esquire. He has held visualization research positions at Parsons School of Design and Columbia University's GSAPP. Prior to his involvement with metaLAB, Gerard was a junior architect with Diller, Scofidio + Renfro in New York City. He is currently an artist-in-residence at the ZKM Institute for Visual Media in Karlsruhe, Germany.

Developing a Multi-agency GIS-based Land Management System
Phil Griffiths

Abstract: The creation of a digital land management system serving the agencies and programs of the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) and our partners in the municipal and NGO community is critically important to Massachusetts' land conservation and management efforts. The establishment of such a system will increase efficiency of application and acquisition processes and conservation restriction monitoring; facilitate information sharing with EEA's conservation partners; provide EEA land staff withaccess to maps of EEA land and documents relevant to those lands; increase public access to government information online.

Philip Griffiths currently serves as the Undersecretary for Environment in the Executive Office of Energy and Environmental Affairs for the Commonwealth of Massachusetts. As Undersecretary, he ensures that the policies and strategic priorities of the Governor and the Secretary of Energy and Environmental Affairs are implemented through the operations of the Department of Environmental Protection, Department of Conservation and Recreation, Department of Fish and Game, Department of Agricultural Resources, the Massachusetts Environmental Police and the Office of Grants and Technical Assistance.

Location-Based Civic Innovation
Nigel Jacob

Abstract: The City of Boston has developed a model of innovation that focuses on using location-based data and local context for delivering new services to the residents and visitors to Boston. The intersection of locality in the context of both physical presence and location-data has been termed Net Locality. In this talk we shall explore a number of the City's Net Locality projects and the role they play in promoting novel forms of citizen engagement.

Nigel Jacob serves as the Co-Chair of the Mayor's Office of New Urban Mechanics, a new group within City Hall focussed on delivering transformative services to Boston's residents. Nigel also serves as Mayor Menino's advisor on emerging technologies. In both of these roles Nigel works to develop new models of innovation for cities in the 21st century.

Collaborations on Open Geo-Software and Open Geo-Data
Bibiana McHugh

Abstract: Agencies can save significant costs with open source software (OSS), however, there are other factors and benefits to consider. TriMet chose an OSS solution that now powers all its web maps. Freed from limitations, geo-data is brought together in one location, and collaboration with the development community ensures new features get added to the source code for everyone's benefit. Agencies are also realizing the benefits of making their data open to the public. By collaborating with third party developers, very innovative tools are being built that would otherwise require enormous IT resources. Realizing the potential, TriMet collaborated with Open Plans and other developers to build an open source multi-modal trip planner to address our expanding needs and limited resources. In less than a year, the Open Trip Planner was generating trips in several countries around the world using all open datasets including Open Street Map (OSM). Collaboration continues with local jurisdictions and the OSM community on OSM data improvements and maintenance.

Bibiana McHugh has worked in TriMet's Information Technology Department since 1997 and currently leads a team of innovative web developers and analysts as the IT Manager of Geographic Information Systems and Location-Based Services. Bibiana leads several open data and open source software initiatives including opentripplanner.org, maps.trimet. org, developer.trimet.org, trimet.org/apps. After initiating collaboration with Google for the first release of Google Transit, she helped pioneer the now worldwide standard General Transit Feed Spec (GTFS). Bibiana received her degree in Geography from the University of Kansas.

Geospatial Collaboration with GeoNode
Sebastian Benthall

Abstract: GeoNode is an open source software project that facilitates geospatial collaboration. Designed as a web-savvy response to spatial data infrastructure, it provides cartography, catalog, uploading, and publishing functionality around geospatial data. Its development has been a collaboration between a number of partners, including OpenGeo, the World Bank, the Australia Indonesia Facility for Disaster Reduction, and the Harvard Center of Geographic Analysis.

Sebastian Benthall leads the GeoNode project at OpenGeo. He joined OpenGeo in 2007 as a hacker because of his passion for open source and open data. Before becoming project manager, he developed other collaborative mapping tools and worked on OpenGeo's business development team. He is a core committer to the GeoExt project, and hold a B.A. in Cognitive Science from Brown University.

Mapping a Media Archaeology of Place: Archives, Databases and Locative Media
Jesse Shapins

Abstract: Media archaeology of place is a method of critical inquiry and artistic practice that maps the sensory experience of suppressed, neglected, and forgotten places through an excavation and re-interpretation of a city's mediated image and sound in archives, databases and locative media arts. This talk will discuss relevant works of media archaeology and showcase digital mapping tools used in these works.

Jesse Shapins is a media theorist, digital humanist, documentary artist, and social entrepreneur whose work has been featured in The New York Times, Metropolis, PRAXIS and Wired, cited in books such as The Sentient City and Networked Locality, and been exhibited at MoMA, Deutsches Architektur Zentrum and the Carpenter Center for Visual Arts, among other venues. Through a hybrid practice of interactive design, public intervention, architectural theory, and experimental pedagogy, his work experiments in mapping the imagination and perception of place between physical, virtual and social space. He is the co-creator of such landmark place-based media projects as Yellow Arrow and Mapping Main Street. He is Co-Founder/Associate Director of metaLAB(at)Harvard, a project hosted at the Berkman Center for Internet and Society, and on the faculty of architecture at the Harvard Graduate School of Design, where he co-teaches Media Archaeology of Place and The Mixed-Reality City. He is also the co-creator of Zeega, an open-source platform for location-based storytelling, a project lead by the non-profit Media And Place (MAP) Productions. More info at http://jesseshapins.net.

Collaborative Analytics to enable Open Conversations and Knowledge Sharing
Andrew Turner

Abstract: GeoCommons is a global community of users that are crowd-sourcing open geospatial data, visualization and analysis. With over 50,000 public datasets, it is one of the largest online repositories and tools for access spatial data and collaborating with other users. This presentation will demonstrate how the underlying GeoIQ platform enables for smarter and faster decision making across multiple groups and organizations. Attendees will learn how to perform easy analysis and share this privately or publicly with other members. They'll also learn about the Digital Gazette platform that deploys GeoIQ to disconnected environments such as Afghanistan to help local citizens understand and map local issues and use online public datasets.

Andrew Turner is the CTO at GeoIQ, the geospatial visualization and analytics platform that powers GeoCommons and numerous other open data sites. Andrew is focused on collaboration and user-generated content around location and time. He is actively involved in open-data projects and open-source projects for easier and better web mapping. Andrew also co-founded CrisisCommons, a global community of volunteer technologists that assist in crisis response. Andrew wrote the O'Reilly shortcut "Introduction to Neogeography" and "Trends in Where2.0" business report in Spring 2008. Previously, Andrew was an aerospace engineer building airships, spacecraft and real-time immersive simulators. He received his B.S in Aerospace Engineering and Computer Science from the University of Virginia and his Masters from Virginia Tech.

Between Social Media and GIS: Mapping Revolutions, History, and Catastrophe
Todd Presner, Yoh Kawano

Abstract: Yoh Kawano and Todd Presner will present a series of "digital cultural mapping" projects that demonstrate how traditional GIS data can be enhanced and deepened through historical time mapping, social media, and qualitative story-telling. Using the HyperCities platform (http://www.hypercities.com), we will showcase several projects, including a Los Angeles research project that brings together census data, the history of redlining, and video-oral histories of LA's historic Filipinotown; a series of "twitter mapping" projects that the team has done in Egypt, Libya, and Japan in order to demonstrate the complex ways that social media visualizations (both live streams and archived data) can add depth to how historic events are understood and transform the nature of the public sphere; and, finally, a GIS mapping project that Kawano has led with GIS Corps and Crisis Commons to coordinate crisis management and disaster relief on the ground in Japan.

Todd Presner is Professor of Germanic Languages and Comparative Literature at UCLA. He is the Chair of UCLA's Digital Humanities Program and the founder and Director of "HyperCities" (http://www.hypercities.com), a digital cultural mapping project that brings qualitative story-telling together with GIS data. The project team has completed extensive projects on Los Angeles, Rome, Berlin, Tehran, and many other cities.

Yoh Kawano is UCLA's Campus GIS Coordinator and holds lecturer positions in Urban Planning and Public Policy. With 14 years of GIS project management experience, he has supervised projects in the digital humanities, urban planning, emergency preparedness, disaster relief, volunteerism and archaeology. His current research involves the geo-spatial web, visualization of temporal and spatial data, and systems that leverage social media and web services in conjunction with traditional information systems.

Live Editing Your Map with OpenStreetMap on MapQuest
Patrick McDevitt

Abstract: Nine months ago, MapQuest committed a team to the exploration, adoption, and promotion of crowd-sourced mapping. Since then MapQuest has become a member of the OpenStreetMap community, released 27 international mapping sites with the ability to report errors on the map, or edit the map, and experience changes to the map within minutes. Numerous APIs and tools have also been released to encourage growth and adoption by the developer and OpenStreetMap community. Several key open-source projects have been heavily supported along the way. Patrick McDevitt will provide a hands-on session demonstrating the new features on these Open sites that are only possible thanks to crowd-sourced mapping, how to directly change the map yourself, and a walkthrough of the services and tools available to-date. Along the way he'll share some of the lessons learned of being a large company interacting as part of a citizen-based community, and what it means to adopt "Open" as a company practice.

Patrick McDevitt joined MapQuest in February 2011 as VP, Engineering. Previously he was the VP of Community Mapping with TomTom where he developed the company's strategies for processing both active and passive crowd-sourced data. From 2006 to 2009, Mr. McDevitt was based in Gent, Belgium where he led Tele Atlas' Global Engineering efforts and was a member of the integration team following the acquisition by TomTom. From 2000 to 2006 Mr. McDevitt worked in various senior engineering and operational roles at Geographic Data Technology (GDT) and helped to secure that company's acquisition by Tele Atlas. He holds an undergraduate degree from The College of the Holy Cross and an MBA from The College of William and Mary.

Open Access to Web Mapping Services (Don't Feed Me – Teach Me To Fish)
Christian Jacqz

Abstract: GIS data are distinguished from many other kinds of data in the public domain by being multi-purpose, useful in many disciplines, across economic sectors and between levels of government. They are also typically expensive, representing at a statewide level an investment of millions or even tens of millions of dollars. Web mapping services provide access to GIS mapping via a published interface specification, empowering the end-user to design and build exactly the client they want, rather than placing an additional burden on the agency hosting the data. I will discuss how this has worked in Massachusetts – in general the approach is both cost-effective and extremely dynamic, but poses some particular challenges from a management perspective.

Christian Jacqz has been Director of the MassGIS program since 1992 –starting in the Executive Office of Energy and Environmental Affairs (EOEEA) and then in 2010 moving to the Executive Office of Administration and Finance. MassGIS is a technical resource for state agencies, regional and local governments and the private sector.

Using A GeoDjango, MongoDB, Solr and HTML5 Stack to Lazily Geo-Reference Government Data
Dan Yamins
Project Manager of GovData at Harvard IQSS

A GIS approach to evolving and leveraging online geospatial communities
Bernard Szukalski

Abstract: Geographic information systems have evolved rapidly along with supporting technologies, especially with regard to the Web. Social media and crowd-sourced information have also become increasingly relevant, enabling a larger community of participants and broad collaboration. The convergence of these factors and technologies has fostered new patterns of GIS implementation and use, and has led to the creation of an integrated, online geospatial framework. This framework, along with the pervasiveness of the Web, mobile technology, and greater opportunities for crowd sourcing, makes it possible to support a widely accessible, open, online geospatial community that leverages intelligent maps as the foundation for communicating and making decisions, and driving GIS ubiquity.

Bernard Szukalski is a Pennsylvania native and has a degree in Biology and Chemistry. Arriving at ESRI in 1986 with a background in both environmental consulting and biomedical research, he began his GIS career as an Applications Specialist working on the Peacekeeper Rail Garrison and CIA World DataBank projects. Over the past 25 years at ESRI, he has held a variety of positions and served in many different roles, covering a broad spectrum of GIS implementation and software development projects. Currently Bern is a product strategist and technical evangelist, focusing on making GIS more widely available and shareable via the Web.

Social Explorer
Andy Beveridge

Abstract: Social Explorer.com is an online research tool designed to provide quick and easy access to demographic information from 1790 to the present. The easy-to-use web interface helps users create maps and reports to illustrate and analyze demography and social change. From libraries to classrooms to the front

page of the New York Times, Social Explorer is helping advance social research and understanding.

Andrew A. Beveridge, Ph.D., is Professor of Sociology at Queens College and the Graduate School and University Center of the City University of New York. He and his team developed Social Explorer (www.socialexplorer.com) that allows user to visualize and make reports on change in the US from 1790 to the present. Funded by the National Science Foundation, a professional edition is now distributed by Oxford University Press, and a student edition by Pearson. The Reference and User Services Association (RUSA) named Social Explorer as an Outstanding Reference Source for 2010 this week. (RUSA is a division of the American Library Association.)

BioMosaic: mapping the intersection of migration, demography and disease
David Scales

Abstract: The US is currently made up of a diverse population with varied health outcomes and disease risk. Approximately 12% of the US population is foreign-born, defined as being born abroad and neither parent a US citizen. Known health disparities between US- and foreign-born populations are affected by differing rates of endemic disease, obesity, travel patterns, and infectious disease exposure. The BioMosaic project aims to help public health practitioners better understand and assist foreign-born populations through the use of interactive maps containing demographic information as well as data on socio-economic status, migration and infectious diseases.

David Scales MD,PhD (Sociology) is a research fellow with Professor John Brownstein of the Harvard Medical School in the Children's Hospital Informatics Program.

Web Maps in a Data Portal: The Case of the CPE Historical Urban Ecology Database
Brian Bettenhausen

Abstract: This presentation will cover the CPE's efforts to create and publish a sub-county GIS of US urban centers from 1830 to 1930. Beyond briefly looking at the challenges of historical GIS work, this presentation covers the methods and technologies used in digitizing, organizing, and creating a web-portal for a GIS with dozens of maps and over 15,000 descriptive variables, with more being added continuously.

Brian Bettenhausen is a Research Program Coordinator for the Center for Population Economics at the University of Chicago, where he is primarily responsible for data spatialization and the creation of new GIS data.

WorldMap
Ben Lewis

Abstract: The Center for Geographic Analysis is developing WorldMap Alpha (http://worldmap.harvard.edu/alpha), an open source platform designed to encourage collaboration between researchers who need access to geospatial information. Despite the many ways in which research materials can now be accessed and shared across the web, the methods suitable for geospatial materials lag. The reasons are many and interconnected: 1) the sparse implementation of standards for geospatial interoperability, 2) the size and complexity of geospatial datasets, 3) the lack of a platform to support geospatial collaboration that is easy to obtain and install, 4) the lack of an incentive for researchers to upload geospatial datasets to a system that supports eventual sharing. In this presentation the WorldMap platform will be presented as the beginning of an attempt to address this problem. WorldMap will be described in terms of its basic design and architecture, then the functionality of the system will be described and demonstrated. For those who would like to learn more about the platform and obtain hands-on training, there will be two WorldMap workshops to be held May 7th which you can sign up for.

Ben Lewis is Senior GIS Specialist at the Center for Geographic Analysis at Harvard. He currently manages WorldMap, an infrastructure to support collaborative research centered on geospatial information, which extends the previous AfricaMap project. Before Harvard, Ben worked as a consultant designing open source mapping systems for government agencies. In previous work he coordinated the Land Acquisition Mapping System for the South Florida Water Management District, started the GIS group for transportation engineering firm McCormick Taylor, and worked in the GIS Lab at U.C. Berkeley. Ben has a Masters in Planning from the University of Pennsylvania.

GeoData@Tufts: The OpenGeoportal
Patrick Florance, Stephen McDonald, Chris Barnett

Abstract: Tufts is collaboratively developing an open source, federated web application to discover, preview, and retrieve geospatial data. Tufts is leading a partnership of several universities and organizations that makes thousands of geospatial data layers available through a single open source interface; the application also incorporates some new innovative search techniques. Partners include Harvard, MIT, MassGIS, Princeton, Columbia, Stanford, UC Berkeley, Yale, etc.

Patrick Florance is the Manager of Geospatial Technology Services at Tufts University and Adjunct Lecturer at Fletcher School of Law & Diplomacy and at the Friedman School of Nutrition Science & Policy. He manages geospatial technology services and teaches GIS. Patrick is the project manager of OpenGeoportal. Previously Patrick was the digital cartography specialist at Harvard University. He has worked in a variety of private, academic, and public environments including New York City Planning.

Steve McDonald is one of the two developers behind OpenGeoPortal. He is responsible for search (which is built on Solr) and contributes to the client-side code. Steve has been at Tufts for 5 years where he has worked on a variety of web-based communication and collaboration tools.

Chris Barnett is a co-developer of OpenGeoPortal. His principal work was been on client-side javascript and in providing expertise on web mapping services. Prior to his work on OpenGeoPortal, Chris worked for MIT GIS Services, where his projects included work on MIT's web portal for geospatial data, GeoWeb.

Digital Atlas of Roman and Medieval Civilizations
Guoping Huang

Abstract: The Digital Atlas of Roman and Medieval Civilization (DARMC) makes freely available on the internet the best available materials for a Geographic Information Systems (GIS) approach to mapping and spatial analysis of the Roman and medieval worlds. DARMC allows innovative spatial and temporal analyses of all aspects of the civilizations of western Eurasia in the first 1500 years of our era, as well as the generation of original maps illustrating differing aspects of ancient and medieval civilization. A work in progress with no claim to definitiveness, it has been built in less than three years by a dedicated team of Harvard undergraduates, graduate students, research scholars and one professor, with some valuable contributions from younger and more senior scholars at other institutions.

Guoping Huang received his Doctor of Design degree from Harvard Graduate School of Design in 2005. He also has a M.S. in landscape planning and a B.S. in urban and regional planning. Guoping had been working as a GIS teaching assistant and teaching fellow at Harvard Graduate School of Design. His main research interest is how to apply GIS technology in landscape and urban planning. Dr. Huang is also the Senior GIS editor for the Digital Atlas of Roman and Medieval Civilization project (http://darmc.harvard.edu).

Spatial Intelligence with Demographic and Economic Information of China
Shuming Bao

Abstract: The government statistics, Census data, and GIS data provide comprehensive demographic, economic and business information for China studies. This presentation will present some spatial intelligence technologies for spatial data integration, data selection, and data analysis. It will demonstrate how space-time data of different formats and sources can be integrated, visualized, and reported in a web based system. Some applications in disaster assessment, environment, health, regional development, cultural and religious studies, and household surveys will be discussed for China and global studies.

Shuming Bao received his Ph. D. in applied economics from Clemson University in 1996. He was a research scientist on spatial statistics at MathSoft from 1996-97, and is currently a senior research coordinator for China initiatives of the International Institute and the senior research associate of the China Data Center at the University of Michigan in Ann Arbor. Dr. Bao's primary research interests are in GIS, regional economics, spatial statistics and econometrics.

GIS Web Application for Living Plant Collection Research
Brian Morgan

Abstract: This presentation will demonstrate an evolving web application template being developed by the Alliance for Public Gardens GIS and the Arnold Arboretum of Harvard University that provides interactive, online, map-based access to living plant collections data. The application allows researchers, collection managers, and visitors to view and analyze the collections of the Arnold Arboretum in their cultivated and native environments, and integrates information from herbaria, genetic, phylogenentic, reference, and biodiversity informatics collections. The ultimate goal of this project is to provide easy access to integrated collection information, and powerful tools for spatial collection analysis and research that can be employed by public gardens worldwide.

Brian Morgan is the Putnam Research Fellow at the Arnold Arboretum of Harvard University, the Director of the Alliance for Public Gardens GIS, the GIS Manager at the UC Davis Arboretum, and a doctoral candidate in the UC Davis Geography Graduate Group. His primary research interests lie in the application of GIS technology to the visualization and analysis of cultivated living plant collections. He is a recent recipient of an Esri Special Achievement in GIS award for his works as the lead developer of the ArcGIS Public Garden Data Model; an evolving spatial database schema that includes cartographic templates and geoprocessing tools for creating and analyzing a public garden GIS.

Cityscapes
Andy Anderson

Abstract: Cityscapes is a mapping framework for urban and cultural studies that integrates audiovisual media illustrating particular locations. Students studying neighborhoods in a city can use an online map to navigate through its streets and terrain, overlay historical maps and adjust their transparency, and create placemarks that link to photos, sound clips, videos, and textual commentary, creating a type of collaborative presentation. Cityscapes was built using a combination of commercial, free, and open-source software (both home-grown and externally developed), and is a collaboration between Amherst College and Smith College.

https://www.amherst.edu/offices/it/teaching_research/projects/cityscapes

Andy Anderson is an Academic Technology Specialist at Amherst College, focusing on mathematical and spatial technologies. He has a Ph.D. in physics and more than twenty-five years' experience in research, teaching, and using and supporting academic technology in higher education.

DistrictBuilder: An Open Source Web Based Redistricting Application
Micah Altman

Abstract: The drawing of electoral districts is among the most manipulable and least transparent systems in democratic governance. In this talk we describe a new open-source software package, accessible to the public online, that helps individuals and groups to create and evaluate redistricting plans simply. This tool supports the principles of transparency recently articulated by good government groups. We expect that this tool can improve transparency and have a positive impact on the results of redistricting.

Micah Altman (Ph.D. California Institute of Technology) is Senior Research Scientist in the Institute for Quantitative Social Science in the Faculty of Arts and Sciences at Harvard University and Archival Director of the Henry A. Murray Research Archive. Dr. Altman conducts research in social science informatics, social science research methodology, and American politics, focusing on the intersection of information, technology, and politics; and on the dissemination, preservation, and reliability of scientific knowledge.

GIS at MIT
Lisa Sweeney

Abstract: MIT GIS Services, of the MIT Libraries, supports a dynamic community working to solve exciting, real-life problems. The GIS team helps people think through their project ideas, find and use geodata, and learn how to use the tools they need. We support GIS teaching and research in all disciplines at MIT via an online international geodata repository - MIT Geoweb, workshops, in-class instruction, individualized consultations, and by providing collaborative GIS workspace and GPS equipment loans.

Lisa Sweeney has been supporting people learn and use GIS for over a decade, currently as the Head of GIS Services in the MIT Libraries, and previously as the GIS/Data Center Director at Rice University. In addition to teaching workshops and helping individuals, she is also in charge of collecting materials to support user projects and overseeing development of tools, databases, and user interfaces to improve access to geodata for users. Lisa has a Master of Liberal Arts (ALM) in Management from Harvard University and a B.A. in Biology and Health Science from Rice University. Lisa is a member of the Open Source Geospatial Foundation (OSGEO), and the Boston Area GIS Instructors Group.

GIS Web Applications in Africa
Suzanne Preston Blier

Abstract: This paper outlines recent projects on African history, urbanism, and the slave trade. Among the subjects addressed are the use of view shed analysis in understanding political relationships, the use of historic city spatial data in understanding changing class dynamics, and the ways in which GIS can be employed to enrich our understanding of the slave trade.

Suzanne Preston Blier, the Allen Whitehill Clowes Professor of Fine Arts and of African and African American Studies at Harvard, writes about African art and architecture. She is co-chair of the Africamap website.

Campus Map: http://map.harvard.edu/