Autumn Quarter 2010 – GEOG880 Seminar - Syllabus

GEOG880, SEM 27090, 3-5 units

Web 2.0-, Cyber-, Neo-Cartography & Geospatial Crowdsourcing – From “Digital Earth” vision to “Neogeography”

[Listed as SEMINAR IN CARTOGRAPHY]

Instructor

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Course Description

“...someday soon: You will look into a computer screen and see reality. Some part of your world – the town you live in, the company you work for, your school system, the city hospital – will hang there in a sharp color image, abstract but recognizable, moving subtly in a thousand places. This Mirror World you are looking at is fed by a steady rush of new data pouring in through cables. It is infiltrated by your own software creatures, doing your business.” (Gelernter 1991)

It is clear by now that many of the elements of the vision articulated in Yale Professor David Gelernter’s book “Mirror Worlds” (1991) now have become reality. The idea of a “Geospatial Web” seems an increasingly realistic scenario. Through integration of geographic data and emerging Web 2.0 technologies, such as social networking and volunteered spatial information, many argue that the Geospatial web will revolutionize our understanding, creation, and use of geospatial representations for Web navigation, narratives, problem solving, and artistic expression. So what are these all about, and what are the effects on geospatial theory, methodology, and practice? Do these developments change the way we address issues of space, place, scale, landscape, globalization, and development?

For aspiring academics in geospatial disciplines, it is critical to understand not just how these technologies work but also to have the opportunity to evaluate how they might affect a particular area/field of interest. This seminar will examine and bring together two main themes; the technical foundations for the Geospatial Web and its implications for spatial sciences and society I general.
The first theme will deal with important technical foundations for what we now call the Geospatial web and its current developments, e.g. knowledge representation, standardization, formal ontology, geospatial communities, web services, and volunteered geographic information “citizens as sensors”. The second theme is centered on the many implications of these technical developments on e.g. spatial theory, research, and practice, geographic narratives, the digital divide, social networks, critical cartography, and the 'democratization' of geographic information systems (GIS).

Meetings will seek a combination of ignite presentations by students that will serve as starting points for discussions, break-out group sessions, or brainstorming. Ignite presentation are short (5-10 minutes) and can be e.g. a presentation of key techniques, summarize and raise important arguments or issues, or share findings from own research.

Topics include:

- **Representing geographic knowledge** – concepts, procedures, theories, people, motivation
- **Formal ontology** – information semantics, positionality, inference, uncertainty
- **Infrastructures** – ubiquitous browsing, geospatial web services, metadata, crowdsourcing
- **Applications** – social and spatial communities, narratives, e-government, public participation, crisis mapping, e-Science

All students will have weekly reading assignments and responsibility for presenting one of the key readings to the class. A crucial component will be for participants to engage the literature from their own disciplinary perspective, and be prepared to contribute to discussions on the relationship between the topics discussed and core themes in their own discipline. My primary goal is to make this material useful to you.

For those enrolled for 5 credits an added requirement is a final deliverable. Depending on a participant's interest, the final deliverable can be anything from a review paper, through conceiving of new application frameworks\(^1\), to implementing a demonstration application. These will be presented to the class during the final weeks. A final deliverable is an opportunity contextualize your own research in this intriguing and quickly evolving field or to actually use some of the discussed techniques.

**Litterature**

See separate reading list.

**Tentative Course Schedule**

Week 1  Course introduction

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1 Last year's seminar participants recently submitted a co-authored journal manuscript on 'live' research reports based on discussions and work done during the seminar
Week 2  Representing geographic knowledge
Week 3  Ontology, standardization and metadata
Week 4  Information semantics
Week 5  Interoperability and Collaboratories
Week 6  Geospatial web services
Week 7  Down to the nuts and bolts
Week 8  Volunteered Geographic Information
Week 9  Applications – Immersive environments
Week 10 Applications – student selected readings
Week 11 Finals week - Presentations

Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University’s Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University’s Code of Student Conduct and this syllabus may constitute “Academic Misconduct.”

Disability Services

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; http://www.ods.ohio-state.edu/.