
Taubman College of Architecture and Urban Planning
Architecture 531
Winter 2011
Malcolm McCullough

Course overview:

Networked Cities

Background: The latest layer of urban infrastructure is digital. Mobile communications, embedded computation, sensate devices, and geocoded data have taken information technology beyond the desktop into the sites and situations of everyday life. Instead of disappearing into placeless cyberspace, the global information society is becoming increasingly urban. Besides extending anytime-anyplace connectivity, recent technological developments intensify local situations. The design challenge of urban computing unites the agendas of architecture and interaction design, and aligns both of these disciplines on a more human centered process.

Goals: This course should help you understand the relationship between environment, technology, and human activity. It should also help you understand infrastructure and its history, particularly with respect to information technologies, and especially as these bring global and local cultures in to new relations. Through lectures, you will gain some exposure to several key issues and be invited to take a longer view. Through seminars, you will get a chance to take a position on several of these issues, and to discuss them in depth in an open setting. Through a set of storyboard projects, you are invited to identify significant design opportunities, past, present, and future.

Requirements: There are five main components to the course requirements, and each is weighted equally toward the your course grade. (Each of these components is simply graded as check/plus/minus.) The first component is spoken—regular and sensible participation in the seminars is the main focus of the course. Second, the written component of the course is a weekly response to the readings, plus a preliminary survey exercise. There is no research paper. Instead the remaining three components are short case study projects. These are to be presented in storyboards and posters: one in historical research, the second a comparative critique of recent design installations; and the third a creative proposal in urban computing. Each of these will remain at the level of an idea narrative, without substantial effort on artifacts.

Enrollment: There are no course prerequisites, but you must be a graduate student, or else 4th year undergraduate. Participants from outside the College are especially welcome, particularly from the School of Information. Our diverse skill set may include graphic communication, interface design, building technologies, urbanism, network sociology, and technological history. All will come into play. No participant is expected to bring most of this; the course is about exposure and adaptation to these interrelated forms of design knowledge. The main benefit may be in the ability to read and write, and speak and listen, with and for people from related disciplines.

Networked Cities

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Schedule of Topics

INTRODUCTION

1/10 Overview: Objectives, organization, scope, and format

PART I: INFRASTRUCTURE

- 1/24 Seminar: Stilgoe: "Gateway"
Lecture: A short history of urban infrastructures
Warmup: Preliminary survey exercise due
- 1/31 Seminar: Cronon: "Pricing the Future: Grain"
Lecture: Case study: Chicago
- 2/7 Seminar: Nye: "Middletown Lights Up"
Lecture: Case study: Electrification
- 2/14 Seminar: Levinson: "Radio—All Together Now" and
McLuhan: "Media Hot and Cold."
Presentation: Project 1: Crossovers between infrastructures
- 2/21 Seminar: Castells: "The Space of Flows," and
Novak "Transmitting Architecture"
Lecture: "What was Cyberspace?"

PART II: AMBIENT INFORMATION

- 3/7 Seminar: Greenfield: *Everyware*
Lecture: Ambient, pervasive, tangible, urban, ubiquitous...
- 3/14 Seminar: Hill: "The Street as Platform" and
Manovich: "The Poetics of Urban Media Surfaces"
Presentation: Project 2: Urban markup
- 3/21 Seminar: Thompson: "I'm So Totally, Digitally Close To You" and
boyd "Why Youth (Heart) Social Network Sites"
Workshop: Project 3 introduced / workshop on visual communication
- 3/28 Seminar: Kuniavsky: "Information Shadows" and "Devices are Service Avatars"
Lecture: Megacity resources as design subject matter
- 4/4 Seminar: Taylor: "Noise in Formation"
Lecture: Attention, architecture, and information overconsumption
- 4/11 Workshop: Individual project consultations
- 4/18 Presentation: Project 3: Inhabiting information

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Creative Projects

This course provides an opportunity to take part in interdisciplinary design ideation in a low-risk and culturally-literate setting. The creative projects in this course differ from usual work in architecture and interaction design in a number of ways. First, they are less directly about appearance, performance, or usability than about cultural situations. Or at least they treat the former concerns as necessary but not sufficient to the latter. Second, they tend to be collaborative—you will be asked to make assumptions, decisions, and design moves outside your customary domain of inquiry. Third, these projects are developed as self-explanatory narratives. This is not a studio; these projects are intended mainly to stimulate your thinking about the issues under consideration in the seminars. We will have time neither to labor on formal artifacts nor to explain them for discursive juries. This limitation can help shift our focus, however, from interpretation of objects to documentation of experiences. And since this is a course in imaginative propositions (another of our limitations is on doing field observations) our production focus becomes intervention in situations in the digitally augmented city. In support of this approach, we will be using the document genre of storyboard: a time-based series of illustrations about a situation. A class session will be devoted to the presentation and collective review of each of these projects. Projects will be considered for character, specificity, legibility, and depth of research.

- Project 1:* “Crossovers between infrastructures,” will ask you to identify and research one phenomenon or pattern in the history of the city, in the meetings of various technology grids, and in the role of inscribed information. This will focus on historical perspective.
- Project 2:* “Urban markup,” will ask you and a partner to identify and make a comparative critique of two projects in the recent surge of ambient, locative, and responsive urban computing installations. This will focus on research and criticism.
- Project 3:* “Inhabiting information” provides a chance to develop a team creative proposal about the role of pervasive media and the value of design, for a situation in everyday life, on a theme to be agreed on by all, such as access to urban resources.

Networked Cities

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Seminars

Discussions are the heart of this course. Many past participants have indicated that they seldom get such a good chance to read, write and discuss so regularly, openly, and at a high level. (Here you must not just like talk about like whatever.) Each seminar meeting will respond to a selected short reading. To help focus your reading and response, and also to launch discussion, you are asked to prepare a half-page “claim” about the text, and to bring a printout of that to the seminar. This is so named to remind that it is not just a synopsis of what you just read, but a distinct reaction to the premise of the text. At the seminar, all claim sheets are put in a physical inbox. Whenever the conversation needs a jump start (usually only at the beginning) anyone may randomly draw one of these statements and read it aloud.

In preparing a statement, you might find it helpful to work from these points of departure:

- 1: What is your interpretation of the text’s essential thesis—what is the author saying, where is the author coming from, and why is that significant?
- 2: What is your main objection or qualification to that position—how do you react?
- 3: What example in this text made you think of another that is not? In other words, what analogies did this text help you make?

Remember that the purpose of this statement is to stimulate discussion. Prepare your remarks for your peers, knowing that they, too, are preparing remarks.

These claim sheets will be collected each week as a record of your participation. Twice, at mid and end semester you will receive some brief written feedback on the overall quality and consistency of these compilations.

This is *your* seminar. Except to flag general digressions, the instructor will not speak for the first half of the discussion each week, and in the second half will only participate to guide the group further into the issues that it has raised.

Networked Cities

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Seminar Texts

- 1 “Gateway”
John Stilgoe. 1983. *Metropolitan Corridor*. New Haven: Yale Press. pp. 17-47.
A fine introduction to cultural landscape studies.
- 2 “Pricing the Future: Grain”
William Cronon. 1994. *Nature’s Metropolis*. New York: Grossman. pp. 28-41.
A classic of technological-environmental history.
- 3 “Middletown Lights Up”
David Nye. 1992. *Electrifying America—Social Meanings of a New Technology, 1880-1940*.
Cambridge: MIT Press. pp. 1-28. Electrification has commonly been cited as the best analogy
for current challenges in pervasive computing.
- 4 “Radio--All Together Now”
Paul Levinson. *The Soft Edge*. London: Routledge. Pp 78-90.
From one of the better histories of information.
“Media Hot and Cold”
Marshall McLuhan. 1964. *Understanding Media—The Extensions of Man*. Pp 22-32. Might
as well read the whole short classic book.
- 5 “The Space of Flows,”
Manuel Castells. 1989. *The Informational City*. pp 167-171. The classic coinage from
Castells’ early landmark work,
“Transmitting Architecture”
Marcos Novak. 1995. In *CTheory*. For architects, one of the most cited declarations of
cyberspace
- 6 *Everyware—The Dawning Age of Ubiquitous Computing*.
Adam Greenfield. A manifesto. This would be a good one to buy and read more.
- 7 “The Street as Platform.”
Dan Hall. 2008. The classic post on *City of Sound*.
“The Poetics of Urban Media Surfaces.”
Lev Manovich. 2006. In *First Monday*,“ Issue #4: Urban Screens: Discovering the potential of
outdoor screens for urban society.”
8. “I’m so totally, digitally close to you.”
Thompson, Clive, 2008. The New York Times Magazine. September 21, 2008.
“Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social
Life.”
boyd, danah. 2007. “ And/or your own selection from boyd’s works at www.zephorias.org
- 9 “Information Shadows” and “Devices are Service Avatars.”
Mike Kuniavsky, . 2010. *Smart Things—Ubiquitous Computing User Experience Design*. San
Francisco: Morgan Kaufmann. A practical perspective on networked things.
- 10 “Noise in Formation.”
Taylor, Mark C. 2001. *The Moment of Complexity—Emerging Network Culture*. Chicago:
University of Chicago Press. pp 99-124. A foremost architectural theorist on emergence.

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Resources

(UNIVERSITY NETWORK)

- cTools:* Reading matter and project assignments, and complete project links will be posted here.
- IFS space:* Project PDFs should be posted to your public/html directory
- Mail:* networkedcities@umich.edu for announcements by anyone, not just the instructor

LINKS (TEN JUMPING-OFF POINTS)

- www.situatedtechnologies.net A pamphlet series from the Architecture League of New York. Omar Khan, Mark Shepard, and Trebor Schulz, editors.
- www.delicious.com/mmmmc Until Delicious gets shuttered, here is the instructor's set of tags.
- www.grist.org Grist (a leading green solutions news site)
- www.cityofsound.com City of Sound. A respected blog on urban informatics
- www.we-make-money-not-art.com We Make Money Not Art. Regine Debatty. If any blog is famous...in architecture and urbanism
- www.benkler.org The Wealth of Networks. Yochai Bankler. The new authoritative standard on networked social production.
- senseable.mit.edu MIT SenseAble Cities Lab. A leading research unit.
- itp.nyu.edu Interactive Technology Program, NYU. The leader in physical computing design education.
- weburbanist.com A more general-interest blog.
- www.historyoftechnology.org A respected academic society.

BOOKS (FOR HIGHER RESOLUTION)

- Bruce Sterling. 2005. *Shaping Things*. Cambridge: MIT Press. A design manifesto.
- William Cronon. 1994. *Nature's Metropolis*. New York: Grossman. A classic of technological-environmental history.
- David Owen, 2009. *Green Metropolis*. New York: Riverhead. A defense of urbanism.
- Mike Kuniavsky. 2010. *Smart Things—Ubiquitous Computing User Experience Design*. San Francisco: Morgan Kaufmann. A practical perspective on networked things.
- Peter Morville. 2005. *Ambient Findability*. Sebastopol: O'Reilly. Very smart and practical overview of the information architecture challenges in ubiquity.
- William J. Mitchell. 2003. *Me++ The Cyborg Self and the Digital City*. Cambridge: MIT Press. The last and deepest in the much-read technofuturist trilogy..
- John Thackara, 2005. *In the Bubble—Designing in a Complex World*. The noted symposiarch's print compilation.
- Mark C. Taylor. 2001. *The Moment of Complexity—Emerging Network Culture*. Chicago: University of Chicago Press. Philosophy pick.