

ARC 590

Network: Environments, Scales and Interactions

Department of Architecture

University at Buffalo

Spring 2014 / Thursday, 10:00am-12:40pm / 3 Credits

Instructors: Hadas Steiner / Omar Khan / Jordan Geiger

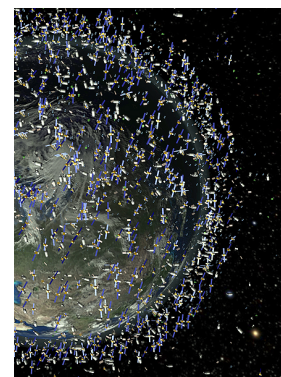
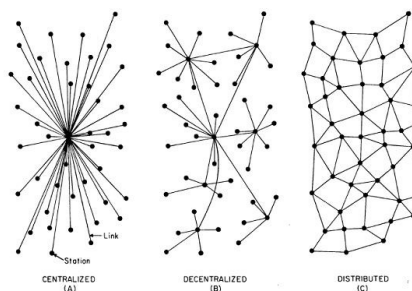
Course Description:

The Spring 2014 “Nets” Seminar is the second in the sequence of Situated Technologies Research Group intellectual domain courses devoted to relevant theoretical and historical models for research in the design of Situated Technologies. The Fall 2013 course is not a pre-requisite for this one.

The seminar explores evolving ideas of physical and data nets and networks as they relate to architecture and urbanism, historically and since the advent of pervasive computing technologies. Taking a broad interdisciplinary approach the course draws texts from science, engineering, information theory, aesthetics, philosophy, sociology, media, art, architecture and urbanism. It includes primary texts as well as their interpretations, providing a critical examination of the ideas and their influence on technology and society. The course will explore three blocks of content, loosely looking at notions of habitat and habitation as they have been conditioned by ecological and technological discourse; network topologies and the emergence of cross-scalar human-computer interactions that range from tiny material innovations to the influence of orbital satellite networks on our built environment.

The course will serve as a counterpoint to concerns around “network ecologies” to be addressed within the STRG studio, but will also be of interest to students interested in related matters of urbanism, ecology, human factors and material innovations in architecture.

This seminar will be as a set of 3 successive month-long blocks, each taught by a different instructor: Hadas Steiner, Jordan Geiger, and Omar Khan.



Semester Schedule:

The following is subject to change during the course of the semester.

January 30 / All Instructors Intro

Block 1: **Network Environments** / Hadas Steiner

The growth of ecological science led, in the twentieth century, to the debate over of the concept of habitat in architectural circles that directly influenced the trajectory of postwar practice. The support on the part of the younger CIAM generation of the cause of habitat was further instrumental in the shift to the ecosystem model of the city championed by neo-avant-garde practitioners of the 1960s and 70s. In these four weeks, we will look at how ecological and social models of biology played a crucial role for the reformulation of the built environment as part of a complex system of adaptive interactions.

February 6 / Ecosystem

February 13 / Habitat

February 20 / Network

February 27 / Environments

Block 2: **Network Scales** / Jordan Geiger

Nets evoke architectures of small and large spatial and administrative orders: legal, financial, technological and also climatic events of different scales. This block of the seminar will consider networks and ecologies across sweeping scales: orbital satellites and subsea fibre optic cables surrounding the planet and small place-based devices and locative media in our hands. Nets between these scales place architecture and our experience of buildings and cities literally in the middle.

March 6 / Flesh: Incorporated or Embodied

March 13 / City: Songdo and Company [+ First Paper Due]

March 20 / Spring Break

March 27 / Region: The Surface and the Zone

April 3 / Planet: Sea, Stack, Satellite

Block 3: **Network Interactions** / Omar Khan

This block of the seminar will focus on the topology of networks that emerge out of the relationship between spaces, information/communication technologies and users (humans and algorithms). It will also explore how emerging building technologies like BIM, Smart Buildings and the Smart City are organizing these networks and examine critically the ends they look to serve.

April 10 / Network Topologies

April 17 / Situated Actions [+ Second Paper Due]

April 24 / Building Information Models and Systems Interaction

May 1 / Smart Building / Smart City

May 8 / Reading Days

May 15 / [Final Paper Due]

Course Work:

Reading Responses:

Each week, you are to write and post to the course website a short response to the assigned readings, very briefly summarizing your understanding of the main arguments and more importantly offering your own personal response to the ideas therein; how the various voices in the week's readings respond to one another; or other issues that you deem noteworthy and may be the foundation for in-class discussions that week.

Papers:

Our principle work output for the semester will be three short papers, the focus of which is synthetic and interpretive of the reading content. Each paper will be approximately 2000 words in length (double spaced) plus footnotes and bibliography, correctly formatted and due two weeks after the completion of the respective month-long module. See schedule for details and refer to each instructor's particular requirements for each paper, to be announced or distributed in class during the semester.

General Requirements

Attendance:

Attendance is mandatory. Students are required to attend the full length of all classes, turn in all assignments, and participate in weekly discussions. Students are responsible for obtaining all hand-outs, information, and notes provided in class. Three tardy arrivals (5 minutes after class begins) will equal one absence. Students who are habitually late or absent from three or more classes will receive a failing grade. If more than one class is missed due to illness you must submit written verification from a physician and notify professor via e-mail or in writing immediately. Written medical documents must be submitted within two weeks of an absence. During class, turn off cell phones, etc. Computers may only be used for in-class presentations. Web surfing or emailing during class is unacceptable.

Grading:

The final grade for the course will be determined by evaluation in the following areas:

In-Class Participation 20%
Reading Responses 5%
Paper 1: 25%
Paper 2: 25%
Paper 3: 25%

Students are expected to read all assigned texts and be prepared to discuss them in class. All papers, assignments, and presentations must be completed on time and in full. Written assignments must be handed in typed, double-spaced, and spell-checked with complete references (footnotes, bibliography, illustrations) formatted according to a writing manual of style. There will be no make-up presentations. There will be a penalty that is equivalent to one-half letter grade per day for any work submitted late.

Measurement of Student Performance:

A 93-100 A Clearly stands out as excellent performance

A- 90-92

B+ 87-89

B 83-86 B Grasps subject matter at a level considered to be good to very good

B- 80-82

C+ 77-79

C 73-76 C Demonstrates a satisfactory comprehension of the subject matter

C- 70-72

D+ 67-69

D 60-66 D Quality and quantity of work is below average, marginally acceptable

Failing 59- F Quality and quantity of work is below average and not acceptable

Academic Integrity:

Students are reminded of University Policy regarding Academic Integrity, as stated in the University at Buffalo Undergraduate Catalog 2005-2006:

"The University has a responsibility to promote academic honesty and integrity and to develop procedures to deal effectively with instances of academic dishonesty. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect for others' academic endeavors. By placing their name on academic work, students certify originality of all work not otherwise identified by appropriate acknowledgments."

This policy includes, but is not limited to, the following: Students should not cheat on exams. Students should not submit previously completed work as original work.

Students should not submit work done for one class to fulfill the requirements of another course without the permission of the instructor.