11:320 Digital City Design Workshop
Senseable Places

Spring 2013

Friday 9-12, Room 10-401, Credit 3-0-9

Team

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Introduction

The Digital Revolution is changing the way we live today as radically as the Industrial Revolution did almost two centuries ago. As urbanization accelerates across the world, digital media and information technologies hold huge potential for understanding, designing, and managing cities. Over the last few years, the Senseable City Lab has aimed to anticipate the needs and opportunities that now exist in our cities as they incorporate these new technologies into the built environment.

This workshop is built around two or more sites that are made available to the class by the sponsors of the Senseable City Lab: Cape Town, South Africa; Medellin, Colombia, and possibly others. We will engage participants in the process of identifying relevant questions, developing project ideas, and evolving them to a detailed set of digital technology and design scenarios for urban places. To capture the multi-disciplinary nature of such projects, students are challenged to draw on diverse fields for their proposals, such as city planning, architecture, engineering, computer science, and social science. The concepts developed in the workshop will be evaluated and critiqued throughout the semester, experts from relevant fields will conduct guest lectures, and members from partnering municipalities will provide feedback on ideas developed during the workshop in relation to the particular challenges their cities face.

The workshop will focus on themes and challenges defined by the cities. Cape Town seeks to encourage people to use public transport and to better integrate different modes of travel. Medellin is looking to attract 21st century industries and activities to its new Innovation District as well as improve the quality of life for existing residents, students, and workers.

Workshop structure

The workshop includes three modules (please see workshop calendar for further information):

Module I // Background and Technology Research

The beginning of the course is intended to familiarize students with research by the Senseable City Lab and the emerging field of digital urban systems . It is followed by background study and preparation for travel to the sites. Lectures will focus on covering the field of urban design and planning in the context of pervasive technologies. Readings and in-class discussions will tie research and precedents in the field with the challenges on-site.

Module II // Site Visit and Project Proposal Development

Students on each team will visit the sites, where they will meet the local partners and present their preliminary project ideas. This will be a time for data collection, sharing ideas, and reality testing of the concept on-site. During and after the trip, we will revise project briefs and proposals. Students will continue to develop concepts iteratively, through feedback from instructions and peers, and from representatives of the sites. Students will present project work at a mid-term review with guest critics. Additional lectures will focus on state-of-the-art technologies and further examples from the field.

Module III // Project Development

Following the mid-term presentations we switch into production mode. Participants further develop and implement ideas. Throughout this process, feedback on projects and technical supervision is provided by Lab members as well as outside collaborators. At the end of the semester, participants present their projects at MIT to representatives from our project partners.

Deliverables

During the workshop students are required to hand in the following materials:
> Interim assignments for each session of module I
> A project proposal/brief formatted according to given specifications
> A fieldwork plan for data collection and design investigations on site
> Mid-term project presentation --Design scenario or Prototype/demo + documentation
> Final project presentation -- in publication format (to be provided)
>
> A digital copy of all assignments should also be uploaded to the course Stellar site.

Grading

Attendance and Class Participation 25%

Interim Assignments 25%

Midterm Presentation 20%

Final Presentation 30%

Final grades are based on a weighted average for the term.

Projects will be graded on presentation quality, innovation, potential feasibility, and appropriateness to the site and its brief.

Team work

The workshop projects may be pursued individually or in teams; we strongly encourage individual projects to expand the range of ideas that result from the workshop. For team projects, we will ask each team member to do a self-assessment of their own and others' contribution to the work.

Individual Weekly Assignments

During the first half of the course, students will be assigned brief assignments to develop and document their ideas and design process. These include site research before and after travel, fieldwork plans, and the design brief that will guide individual contributions to the final project.

Attendance

We expect students to attend every class session, since questions and feedback from each student will contribute to the educational experience for every student. Students should inform the instructors beforehand if they cannot attend a session. Beyond class participation, **each student is required to schedule at least one meeting with an instructor during each of the modules of the class** to discuss progress on assignments and receive personal feedback.

Academic Conduct

Plagiarism and cheating are both academic offensives. If you should turn in an assignment you did not write yourself or previously turned in for another class, it may result in a failing grade for the workshop, and possibly suspension. Anyone caught cheating or plagiarizing will be reported to the Provost in line with recognized university procedures.

Workshop Schedule

Module I – Background and Project Proposal

1	Feb 8	Introduction: what does it mean to live in a digital paradigm?
		Background and goals for cities
2	Feb 15	Gathering and analyzing data from sensors, networks, users, and systems.
		Assignment due: Field observations of digital artifacts, places, situations
3	Feb 22	Visualization, actuation, and response
		Assignment due: Identify significant technologies for innovation
4	Mar 1	Trip preparation, project brief
		Assignment due: Rethink a past project
5	Mar 7-10	**Travel, fieldwork in partner cities** *

Module II – Project Development

6	Mar 15	Travel debrief, observations and changes;
		Assignment due: Field report and revised project brief
7	Mar 22	From brief to proposal;
		Assignment due: Project proposal drafts
	Mar 29	Spring break, no class
8	Apr 5	**Mid-term presentations**
9	Apr 12	Guest lecture TBA

10	Apr 19	In-depth technology review and tutorials
11	Apr 26	Studio work, team and individual progress critiques
12	May 3	Studio work, team and individual progress critiques
13	May 10	**Final presentations with guest critics**

* Tentative date. Travel will last 4-5 days in total, and could take place the following week. Further details will follow.

Readings

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