Spatial Media

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Wednesday 6:30pm - 9:00pm
Thursday 9:30am - 12:00pm
Spring 2012

Description

Spatial Media explores both the design and technical issues involved in the creation of interactive surfaces. This course adopts as a premise that all architectural surfaces are potential dynamic displays. Students are then asked to conceptualize and design interfaces around such interactive platforms, taking into account the spatial and social context of the surface itself. Technical topics include vision-based sensing systems, display integration techniques, and interactive graphics programming. Students work in pairs to complete two large projects over the course of the semester. Projects are evaluated on both the quality of the design and the success of implementation. Additionally, there are weekly assignments that challenge students to consider a wide variety of spaces that are ripe for transformation through the integration of interactive media. Since this class involves programming on an intermediate level, a working knowledge of Processing or C is a prerequisite.

Schedule

Week 1	Course Introduction	Pocode Introduction	Status Quo
Week 2	Computer Vision 1	Display Technology	Project 1 Introduction
Week 3	Computer Vision 2	Interactive Design	Project 1 Concept Presentation
Week 4	Computer Vision 3	Spatial Design	Project 1 Design Presentation
Week 5	Computer Vision 4	Social Design	Project 1 Technical Presentation
Week 6	Computer Vision 5	Information Design	Project 1 Progress Presentation
Week 7			Project 1 Final Presentation
Spring Break			
Week 8	Vision for the Future	Principles	Project 2 Introduction
Week 9	In-Class Experiment 1	Critique & Discussion	Project 2 Concept Presentation
Week 10	Field Trip		
Week 11	In-Class Experiment 2	Critique & Discussion	Project 2 Design Presentation
Week 12	Guest Lecture		Project 2 Technical Presentation
Week 13	In-Class Experiment 3	Critique & Discussion	Project 2 Progress Presentation
Week 14			Project 2 Final Presentation

Grading

Weekly Assignments: 40%
Midterm and Final Projects: 50%
Course Participation: 10%

Failing grades will be given to students who do not complete 3 or more weekly assignments, who do not complete either the midterm or final projects, or who are absent from 3 or more classes. While any of the above will result in an automatic failing grade, poor performance may result in failing as well.

Attendance

It is expected that students will come to all classes on time, unless the professor has been notified otherwise. Repeated tardiness will affect the participation grade. Three (3) absences will result in a failing grade.

Assignments

Students should expect to spend at least 6 hours every week working on assignments outside of class. This includes both weekly assignments and longer term projects. Students are expected to complete assignments on time. Late assignments will not be accepted. Misunderstanding of an assignment is not an excuse for lateness.

Laptops

Laptops should be used for taking notes and working on assignments. Students using laptops for other activities during class will be asked to close their laptops and take notes by hand.

Office Hours

While there are no set office hours, tutoring is available on site for any student who requests it. In addition to tutoring, the professor is available via email and will respond to student questions as quickly as possible. Asking for help is strongly encouraged.

Reading

In addition to lecture notes that will be posted online every week, students will find the following books worth having on their bookshelves both during and after this course.

Bill Moggridge, Designing Interactions. The MIT Press, 2007.
John Maeda, Maeda@Media. Universe, 2001.
Reas & Williams, Form+Code in Design, Art & Architecture. Princeton Architectural Press, 2010.

Linda Shapiro, Computer Vision. Prentice Hall, 2001.
Kernighan & Ritchie, The C Programming Language. Prentice Hall, 1988.
Stephen Prate, C++ Primer (6th Edition), Addison-Wesley, 2011
Richard Wright, et al, OpenGl SuperBible. Addison-Wesley, 2010.
Robert LaganiËre, OpenCV 2 Computer Vision Programming Cookbook, Packt Publishing, 2011.

Magdalena Droste, Bauhaus 1919-1933 (Taschen 25), Taschen, 2006
Gloria Koenig, Charles & Ray Eames: 1907-1978, 1912-1988, Taschen, 2005
Francis D.K. Ching. Architecture: Form, Space, & Order. Wiley, 2007.
Lucy Bullivant, Responsive Environments: architecture, art and design. Victoria and Albert Museum, 2006.
Michael Fox & Miles Kemp, Interactive Architecture, Princeton Architectural Press, 2009.