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ARTS 499: Mobile Mapping for Everyday Spaces

Prerequisites:

This course is intended for graduate-level and upper-level undergraduate students from diverse disciplines, and there are no official prerequisite courses or knowledge sets. However, success of the course is dependent on a balanced distribution of skill-sets and interests. To this end, the instructors reserve the right to deny admittance to the course, in order to guarantee a practical range of experience in our group.

Course Description:

Through an investigation of walking, this course will develop a suite of devices and programs for the mapping and recording of everyday spaces. Using simple sensors, reverse-engineered consumer products, open-source mapping resources, and location-aware devices, we'll discover new and meaningful ways of capturing and sharing the rich data of our everyday walking patterns through neighborhoods, campuses, streets, cities and trails. An emphasis will be on how the collection of ambulatory and locative data can offer programmatic ways to shape social and personal identity. Students and faculty will work closely with visiting artists and scholars to conceptualize investigative methodologies, developing devices that can be easily reproduced and utilized, with as few proprietary or cost-prohibitive technologies as possible.

This class will explore the culture of walking, identifying its shifting roles and contexts. From meditation to fitness, through pilgrimage to protest, walking and its representations embody a purposeful engagement with our immediate environment that is seemingly the antithesis of a technologically mediated existence. Students will be asked to implement these collaboratively designed devices and visualize the collected data in ways that foster embodied knowing and experience. Coursework will include three walked lectures, reading and critiquing papers and designing and implementing software and hardware prototypes. Collaborative teams will be required to investigate our four content areas - walking, mapping, collaboration, locative media – in each assigned project. There will be in-class critiques and a final project. This course is open to both graduate and undergraduate students.

Expectations:

You are expected to be prepared for class through completion of reading assignments, research, preparation of presentations, and above all, through participation in small-group activity. The core of our work will be comprised of collaborative work by small teams - contribution to your team is vital not only to your success in the class, but to the course's success as an experimental enterprise. As much of class time will be dedicated to presentations by instructors and students, small groups will often be expected to meet outside of class to complete work on proposals, projects, and research.

Especially as this course meets only once a week, attendance is imperative. Each absence not previously arranged with instructors will result in the drop of a letter for final grade in the course. Additionally, we will be meeting outside of normal class hours on at least two occasions to conduct research walks - these will be mandatory, and announed by the instructors in advance.

Your final grade for the course will be composed thusly:

20%	Participation and attendance (individual)
15%	Small Group Project 1 (reverse engineering)
15%	Small Group Project 2 (mapping)
50%	Final Group Project

Each group project will be evaluated for its merit in the investigation of our four content areas (walking, mapping, collaboration, locative media) and the parameters as defined by the assignments. Within each group, members will be required to evaluate one another (and themselves) based on individual contribution and project participation. Each individual's project grade will then be determined thusly:

70% Group project (same grade for each member)
15% Group evaluation of individual's contribution
15% Professors' evaluation of individual's contribution

Schedule:

Week 1 : Introductory lecture
Assign readings : Stilgoe, Solnit, Haque + Somlai-Fischer

SATURDAY WALK: Walking the four content areas

Week 2 : Indivdual introductory presentations
discuss readings
assign Reverse Engineering Project (due week 4)
form small groups

Week 3 : presentation on Reverse-Engineering Projects in progress
Presentation on Collaborative Practice

Week 4 : Reverse Engineering project due - presentations and critique
Presentation on Mapping Practices, including Psychogeography
Assign Mapping Project (due week 5)
Assign reading on mapping, space, place

SATURDAY WALK: Derive

Week 5 : Mapping Project due - presentations and critique
GIS demo
Assign Final Project

SATURDAY WALK: Locative/GPS Walk

Week 6 : Introduction to possible tools and technologies through demonstrations

Week 7 : Present initial proposals for Final Project

Week 8 : visiting lecture

Week 9 : Final Project progress reports

Week 10 : visiting lecture

Week 11 : visiting lecture

Week 12 : work period

Week 13 : work period

Week 14 : FINAL PRESENTATIONS / CRITIQUES

Assignment One: Reverse Engineering

Our first project will serve as an introduction to the technical and social aspects of collaboration, and to the process of designing from existing technology through "reverse engineering."

As always, our course's four content areas - WALKING, MAPPING, COLLABORATION, and LOCATIVE MEDIA - should be present in how you address this assignment. However, as a preliminary exercise we are primarily interested in your introduction to COLLABORATION, WALKING, and to the idea of re-working existing hardware.

Assignment

Relying primarily on the collection of objects we provide, your small group is to construct a simple walking experience that features some form of working technological augmentation.

You may locate the technology primarily on the body or primarily in space, but either way you should have a specific site and a specific audience in mind for your project. The assignment is intended to result in a set of "working proposals," in that we will not necessarily test these solutions with specific audiences, or even for any longer duration than for our own class discussion. We will view the results on site, however, and evaluate them based on imagined longer-term use.

Your goal should be to utilize some portion of your kit-of-parts (or parts traded with other groups) in the creation of a meaningful augmented walk that is site-specific.

Methodology

As we move into other projects in this class, we will introduce a variety of formal models for dealing with collaborative production. We will eventually ask your group to choose or form a model for your own process. For now, we would like you to frame your group's project within the CONTEXT-FUNCTION-PROCESS-AUDIENCE system, as outlined in the attached document.

Documentation

Over the semester, we will also be introducing some different modes of documenting our chosen processes, and we will be looking at the role of documentation in creation and collaboration.

For this project, we ask only that you record your group's process through the creation of "narrative minutes" for each meeting. Work together to create these accounts of each session, and post them to the class Wiki under your group's section. We also suggest that you document your process through digital images - you can get a free image-hosting account through flickr.com, a tag-based image library, and then post these images on our wiki. (Add the tag "mobilemapping" to any images you wish to share with the class!)

Technology

We suggest reliance on the "Low Tech Sensors and Actuators" article as a method for technical investigation. With your group, identify possible inputs and outputs, assemble sub-systems to create the system that is your project. (You might also utilize our class Wiki to share discoveries with the class.)

Include in this analysis the act of walking itself - what are the possible inputs and outputs of a walked experience, or of your chosen site? What might it look like to include the human body as another possible actuator, relay, or sensor? To what degree do you want the walker to be aware of the sensing or response of your designed system?

Some suggested questions:

As you develop your proposals, take your idea out for a walk and ask of it some questions. The following suggestions will help to flush out a direction. If your proposal can address the following then it means that you've begun to invest in its exploration. Test out the technology insitu to move it beyond the theoretical. If you can't answer one of these questions, then pose a question about that area of uncertainty.

The relationship between the work and its physical and social-political surroundings is never neutral. How the work, both in its conceptual, technological and formal elements, engages both the viewer and the subject matter is what gives it meaning and agency. The cultural workers' practice is committed to exploring the agency of both form and content.

Here are some other questions that can help us probe more deeply into how we think about our projects and their agency:

- Does the project act to facilitate remembering or learning?
- Is it a means of celebrating a social phenomenon? Such as walking or perhaps exploring some place new?
- Does it tell a story about a place, a person, a thing?
- Is it an agent for social change? Pushing us to consider imbedded social injustices and new possibilities?
- Does the project act to poeticize the physical site or does it create a visual elegance to one's journey through public space? Perhaps it is a tasteful point of focus?
- Does the piece support and fit in to existing social conventions and structures? Or is it perhaps slightly transgressive?
- Or is it meant to critically intervene in the social space as a highlighter or commentary?
- How does its interactivity invite, resist or transform its agency?

Assignment Two: Map and Method

With your group, create a new method for mapping a particular space while walking. Produce a map from this method, and present the map as well as the method.

Your method should be repeatable by others, even if it is designed for use in particular spaces, or particular times.

Your map's final form may be as high or low-tech as your group sees necessary, and may involve any of our senses - visual, aural, or otherwise. The map may be static or dynamic, physical or digital. We will be looking for specific and intentional choices in the arenas of field, extract and plotting as explored in the James Corner article: *The Agency of Mapping: Speculation, Critique and Invention*.

For the sake of this assignment, we would like to distinguish between mapping and collecting - practices that are sometimes hard to tell apart. We propose that though a map may collect information or artifacts, it also attaches these bits to a particular spatial or temporal matrix. This your map should do as well, even if these matrices are of your own devising. One clear way to distinguish collection from mapping to recognize that “Field” is an essential element of mapping although it is rarely considered in collections.

As it is important that your mapping method is repeatable, consider how you might communicate this method to others. It is likely, for example, that your form of mapping might require some unique new measuring tool or collection/recording instrument. If this is the case, you should provide a version of this that others might use, or reconstruct on their own.

Your group's final presentation of the map, therefore, should consist of the map itself, as well as instructions for creating one's own map by the same method. The entire work might take the form of a book, for example, or a webpage, video or audio piece, and may even be accompanied by a tool and/or instructions for building the tool.

As in the last project, we request that you utilize the CONTEXT - FUNCTION - PROCESS - AUDIENCE method at least in your presentation, and perhaps in your method as well. Here are some ways of thinking about this project in light of that process:

CONTEXT

Who normally does the kind of mapping you are doing, if anyone?
What does your method resemble or riff on?
What places, spaces, or events is your method designed for?
If your chosen method suggests use in particular spaces, how aware do you think people are of those spaces?
How universal or particular is your choice of subject matter?
What does your actual map resemble?

FUNCTION

What does your map produce or provide - how might it function for someone who sees the map and not the process?
Mapped information implies valuable information - how readily apparent will the value of your chosen material be?
How are you defining functionality and value? As value is subjective, you may be proposing something as valuable that is not normally seen as such, or re-examining more traditionally-valued information.

PROCESS

How does your group go about brainstorming, deciding, and selecting information to map?
Who in your workgroup values your chosen information set, and why?
What will the role of walking be in your design process?
Where will you start in the process - with a site, a kind of vision, a particular recording method, or with the information set itself?
What will the process of mapping itself be like? Will it take a long time or a short period?

What kind of walking is required to make your map - speed, direction, character?
Will your map read as complete when you present it, or awaiting further entry over time?
When we see the actual map, will we be able to imagine the mapper making it?

AUDIENCE

Who is your map intended for? Who is making the map? (These two might not be the same.)
How many people will your mapping method require for construction?
What knowledge are you assuming about your map viewer?

Project Three: The Augmented Walk

With your group, create a new way of experiencing walking. This way of walking should activate one's understanding of space, place and the movement of our bodies through it. This way of exploring walking should be assisted by re-engineering or augmenting consumer grade electronics as a means of recording, extracting, plotting some form of data. Assume an audience who experiences your project as a discrete experience, akin to a demonstration, art exhibit, or educational event - all tech will be provided for them.

Your augmented walk may be as high or low-tech as your group sees necessary, and may involve any of our senses - visual, aural, or otherwise. The walk must be real and dynamic but the data may be static, dynamic, physical or digital.

To further narrow this assignment we're providing a set of guidelines for the walk.

- Your project **may** be specific to a certain location, terrain, time
- Your project **may not** be specific to any age or gender, and should assume no discipline-specific knowledge
- Your project **needs** to have output that is perceptible after the walk.
  In some cases the manipulation of this data within a designated field (the walk) could broadly constitute a map.
- Your augmented walk **needs** to be repeatable by others given the use of the custom designed technology.

Starting Point
For the sake of this assignment, we would like to recognize a starting point for our consideration of technologically augmented walks, this would be the pedometer. Measuring sequentially each of the walker's steps, on arrival it summates how many steps were taken.

However this example leaves very little of cultural interest to be explored except the ability to approximate how many calories were burned or how far the walker walked. Moving beyond the literal any technology might respond to any of the inputs and outputs that might arise out of the act of walking, of moving through space and through an embodied engagement with place. The challenge is to think outside the more common applications of technology.

Tools
Each group will have a budget of $500.00 to work with. We can't give you the money up front, but you can request that Kevin purchase items for you, or submit receipts for reimbursement.