Introduction to Interaction Design

CIID Fall 2009

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The goal of this five-day course is to introduce students to the core concepts involved with interaction design through brief lectures, hands on exercises, film viewings and discussions. Though the topics covered will involve computers heavily, we will not use computer hardware or software in our exercises—the course is an analog experience of digital interaction concepts. Topics will include, but not be limited to, mental models, metaphors, affordances, usability, gestures, networks, sociality, and augmentation.

PROJECTS

Day 1.

Context Cards

Students work in teams of 4. Each team is given three stacks of cards (yellow, pink and orange). The pink cards have user types: dairy farmer, grassroots politician, pediatrician. The yellow cards have sensors: temperature, humidity, altitude. The orange cards have situations: in an airport, at the beach, on a bike. The goal is to match three cards and develop a product+service experience story around the constraints of that context. Two methods can be used for the matching: spread all of the cards out and match them up; or, blindly draw from each of the three decks and work with what you draw by chance. Groups describe all of their concepts and then act out their favorite concept in a 1-2-minute skit.

Inspired by team ETech workshop with Maia Garau

Concepts explored	Context, sensing, ubiquitous computing, product + service design
School provides	- (Matt provides cards)
Group size	4
Duration	3 hrs (15min intro, 45 mins activity, 2 hr presentations + discussion)

Day 2.

Image: http://diseasome.eu/map.html

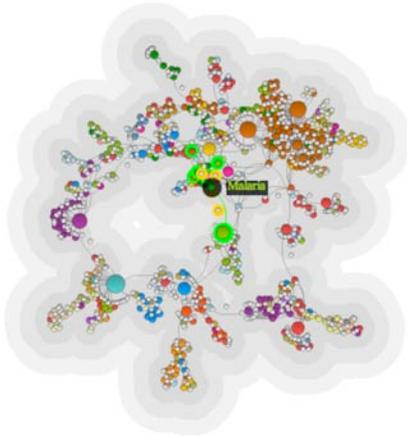## Individuals, Groups and Relationships

This is an information architecture-mapping project and will be done individually by students. The goal is to develop personally meaningful models for depicting friends, colleagues and family members. Students may start with their Facebook network (or other personal favorite). Concepts for sorting such as Location, Alphabet, Time, Category, and Hierarchy will be discussed and students will explore their own "lenses" that reveal the relationships between the individuals in a group. Some individuals may fit into multiple groups (i.e. fellow college alumni + friend + colleague + snowboarding). Students will start by drawing then be encouraged to use transparencies and to make large-format diagrams, physical three-dimensional models using paper, classmates, furniture, rooms, and etc.. Whatever the materials used, work must be LARGE format.

Lens 2: Maps should depict the media channel through which the student interacts with each individual in their network (IM, SMS, email, phone, Skype, Twitter, Facebook….)

Lens 3: Map emotional closeness to frequency of media contact via different media channels.

Concepts explored	Social networks, multiple relationships, information architecture, information design, multiple lenses
School provides	Large format drawing paper, pencils/pens, large format tracing paper
Group size	1
Duration	.5 hr intro, 2 hr working, 2 hr presentations & discussion

Week-long homework project Due Friday.

What is a Switch?

This is given as a homework assignment, which is then discussed in class at the end of the week. Using scrap materials from the workshops and other cheap materials such as paper, drinking straws, paperclips, and etc., students will rapidly sketch model concepts for capturing human gestures to close a conceptual circuit. There is no real electrical circuit—the idea is to just effect the switch mechanism with a gesture (can be breath, dance, blinking) to touch indicated contacts (which can be made of paper or popsicle sticks or paint or whatever). The most important factor here is speed and quantity. Students will begin work on their sketchmodels during classtime on Tuesday and continue the work (producing no less than twenty sketches each) as homework for inclass demonstration and discussion on Friday afternoon.

http://stream.tellart.com/2008/10/31/what-is-a-switch/
http://stream.tellart.com/2009/01/13/what-is-a-switch-fall-2007/
http://stream.tellart.com/2009/03/07/what-is-a-switch-part-iii-aho-oslo-norway/

Matt Cottam & Tellart assignment

Concepts explored	Gestural interfaces, tangible user interfaces, kinematics, biomechanics
School provides	Scrap materials from shops, hot-glue, tape
Students bring	Bags/boxes of inexpensive materials such as drinking straws, wire, marbles, thumbtacks, foamcore, grocery bags, rubber bands, shop scraps, favorite objects, etc.
Group size	1

Day 3.

Friend and Unfriend: Icon Diptychs

Students will each create a pair of icons that must communicate the two social networking actions: *to friend* and *to unfriend*. Students will then use 2-4 colors of post-it notes to create an icon for each of the actions. These icon murals will each be 32x32 post-it pixels in dimension and be done on floors and walls—indoors and out. The discussion will be around the concept for the metaphor and the visual depiction of that metaphor. Students may use graph paper to sketch ideas before committing to building their mural.

Dyptich actions = FRIEND and UNFRIEND

An advanced version of this project could involve stop motion animation using standard still cameras (as seen in: http://tinyurl.com/lz8gmd)

Inspired by the work of Bang-Yao

Concepts explored	Metaphor, information graphic, button-ness, actions, cultural context iconography, symbols
School provides	Graph paper, pencils, 4 colors of post-its
Group size	1
Duration	5 hours including tour of projects
Special requirements	Wall space (how big is the room? Do we need to expand to other parts of the school?)

Retro-fiction Interfaces

Student teams of three will be given a photograph of an old machine interface (airplane, defibrillator, telephone operator) and they will make up a design fiction based on the apparent interface affordances. From the photo they will redraw and physically reconstruct the interface using paper, tape, and other cheap sketching materials. The interpretation of the interface and the things that it controls/interacts with will be acted out by the students.

Inspired by conversations with Ben Cerveny and Mike Kuniavsky

Concepts explored	Affordances, design fiction, story telling, tangible and graphical interfaces
School provides	Printouts, acetate/tracing paper, markers
Group size	3
Duration	4 hours

Day 4.

City as Platform

Students will receive photographs of street scenes and then add speech bubbles to objects in the scene and write what that object would say if it were an information appliance. How would it communicate with other objects and people and contribute to shaping the texture of the city's data presence? How would it shape the human experience of the city?

Each team of three will conduct the ideation and drawing activity five times for five contexts: Utility, Play & Games, Social, News, and Advertising. For each context a team will be given a 3 duplicate prints of a street scene photograph—one for each team member. The group will brainstorm outloud while each member will draw their own rendition of the street scene simultaneously. The drawings will be done as transparent overlays using acetate with markers. At the end of each context period teams will edit their brainstorm into a single overlay containing the groups best ideas for each context.

(inspired by the work of Jack Schulze, Dan Hill, Ben Cerveny and Timo Arnall)

Concepts explored	Ubiquitous computing, city/street as platform, OS and Apps, embedded computing, locative media, mobiles
School provides	Printouts of photos, clear acetate, pencils/pens/dry erase and/or permanent markers (lighter fluid if permanent)
Group size	3
Duration	4 hours

Day 5.

Post-It Phones

Students will work in teams of 2 to imagine new mobile interaction scenarios around a theme/context. Each partner will apply a stack of twenty or so post-it notes to the screen of their personal handheld and draw interface states on each. As the interaction scenario is acted out, the notes are peeled off as the reciprocal actions unfold. A second, advanced, version of the project could be to think beyond states to continuous flow and create flipbook animations with the notes showing a fluid interaction scenario.

Task: collaboratively planning a weekend trip. First iteration is a 2-hour activity. Second iteration uses the same scenario but is reduced to a 1-hour activity in which one person can see but not hear, and the other can hear but not see what is on the device.

Constraints: One component of the interface must be audio feedback (input and output)— students must act it out using voice. Solution cannot be the use of existing mobile/web services. Students must map out the interaction accounting for the limitations/capabilities of their existing mobile devices (includes screen size, web connectivity, data plan, keypad vs. touchscreen…)

Inspired by conversation with Charles Warren

Concepts explored	service design, time, human-human interaction, depictions of physical space in the interface, calendaring, telepresent collaborative work, handheld interfaces, GUIs, information architecture, workflow, states, real-time, hardware and software asymmetry.
School provides	Post-its, markers
Students bring	personal mobile phone
Group size	2
Duration	6 hrs (20 mins introduction, 2hr activity, 2hr presentation + discussion)

Final activity is *What is a Switch* review **party** at 5pm on Friday.

MATERIALS

- A4 paper

- A4 acetate (clear vinyl)

- A3 (larger format) drawing pads/paper

- Pencils, pens, charcoal or other preferred drawing/modeling materials

- Multiple colors of dry erase markers (both chisel and fine tip) – could be permanent markers with lighter fluid as eraser (better for documenting/archiving)

- 3-4 colors of standard post-it note pads (lots)

- thumbtacks

- masking tape, scotch tape and duct tape

- hot glue guns and glue sticks

- A4 printouts of photographs

- Access to room and equipment for viewing films (A/V from laptop)

- Access to workshop scrap materials and other craft scraps/supplies

FILMS

- What is Design Q&A (Eames)

- Airport service concept (Eames)

- Triumph of the Nerds

- Dan Hill talk

- Timo Arnall talk

- Ben Cerveny talk

- Future Concept Videos from Designevidence.tumblr.com

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