SKETCHING

CPSC 544 FUNDAMENTALS IN DESIGNING INTERACTIVE COMPUTATION TECHNOLOGY FOR PEOPLE (HUMAN COMPUTER INTERACTION)

WEEK 7 – CLASS 13

© Joanna McGrenere and Leila Aflatoony
Includes slides from Karon MacLean and Jessica Dawson
TODAY

• Sketching [20 min]
  • In-class activity
• Human abilities [50 min]
• Project questions [10 min]
SKETCHING WITH OFFICE SUPPLIES

<table>
<thead>
<tr>
<th>WHAT TO DO</th>
<th>WHAT YOU SELECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Touch a different color or scan another item</td>
<td>JPG STROLLER</td>
</tr>
<tr>
<td></td>
<td>GREEN</td>
</tr>
<tr>
<td></td>
<td>RED</td>
</tr>
<tr>
<td></td>
<td>BLUE</td>
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</tbody>
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<table>
<thead>
<tr>
<th>ITEM</th>
<th>STYLE</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPG STROLLER</td>
<td>GREEN</td>
<td>$98.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TAX: 10.00</td>
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<tr>
<td></td>
<td></td>
<td>TOTAL: 124.98</td>
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</tbody>
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<table>
<thead>
<tr>
<th>ALL DONE?</th>
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<tbody>
<tr>
<td>ORDER</td>
</tr>
<tr>
<td>PRINT</td>
</tr>
<tr>
<td>DISCARD</td>
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reconstruction of the pencil sketch of the online shopping system using office supplies.
Annotations are names, labels and explanatory notes whose spatial location identifies the part(s) of the sketch they refer to. That is, annotations are graphical marks that are incorporated into the drawing itself.
NOTES

Notes are any text incorporated in the sketch where its spatial location relative to parts of the drawing is not important.
SLIDWARE FOR DRAWING
exploiting commonly available digital presentation tools for sketch drawing
DIGITAL VS PAPER-BASED SKETCHING

What to do
Touch a different color or scan another item

What you selected
JPG Stroller
- Green
- Blue
- Red

Item
Style
Cost
JPG Stroller
Green
98.00

All done?
Order  Print  Discard

tax: 10.00
Total: 124.98

What to do
Touch a different color, or scan another item.

What you selected
JPG Stroller
- Green
- Blue
- Red (out of stock)

Item
Style
Cost
JPG Stroller
Green
98.00
Delete

tax: 6.98
Total: $104.98

Place your order  Print this list  Throw this list away
TEMPLATES

pre-draw the constant, non-changeable parts of your sketch as a template that you can use and reuse.
PHOTO TRACES
create collections of sketch outlines that form the basis of composed sketches

1. Decide on the hand posture(s) you want. Take your photos of the hand postures you would like to sketch.
2. Import the first photo of a hand posture into your digital drawing editor. Set the opacity of this photo to 50%.
3. Draw a stroke path along the outline of the hand. It is not necessary to be too accurate with this.
4. Remove the original photo from the background. What remains on the drawing page is the outline of the hand posture that you can fine tune (e.g., to scale, to rotate, to re-adjust stroke thickness) and save for later use.
USING THE PHOTO TRACES

Sketch out a particular gesture that a horizontal display – a digital table – will understand.

Add arrows that indicate how the orientation of parts of the hand relative to one another are tracked to recognize postures on an interactive tabletop.
EXAMPLE

Using a Single Sketch Element for Two Different Sketches
EXAMPLE

add features to the sketch that are not in the original photo (e.g., the images in the flipbook, or the details of notes on the poster wall).
HYBRID SKETCHES

1. Take a photo, or series of photos, of a place where the interaction takes place.
2. Create or reuse a photo trace sketch of the person and/or system.
3. Create an opaque background for our outline sketch.
4. Sketching the interface.
HYBRID SKETCHES
EXPLORE AND SKETCH OUT DIFFERENT DESIGN IDEAS

Augmented-Reality Thermostat Visualization: The sketches illustrate three alternative visualizations that a micro-projector of a mobile phone could display when pointing the phone next to the thermostat.
COLLABORATIVE SKETCH
sketching to brainstorm, express ideas and mediate interaction

collaborative sketching is as much about group interaction around the sketch (e.g., brainstorming and commenting on each other’s ideas) as it is about producing a sketch. Indeed, the sketch itself as produced may have been less valuable than the conversations around it.
ACTIVITY [10 MIN]

Sketch out two different interface screens for the following design scenario:

An appliance vendor is producing a refrigerator with a touch monitor and camera embedded in its front. The vendor wants you to design an interface where a person can create a shopping list on this monitor. The interface will allow that person to modify this list, print this list, email this list to others, and use the list as the basis for navigating to (and ordering from) web-based on-line shopping systems. The system will have software that can recognize product bar codes (although not perfectly), a database that you can populate with standard shopping items, and a touch sensitive display where menus and buttons can be selected.

Use post it notes, annotations, and arrows to elaborate on your design idea.
REFERENCE