VIST206 Project 3 Assignment

Tangible Visualization for Body Interface

Over the past few years, a quiet revolution has been redefining our fundamental computing technologies. Flexible displays, shape-changing and light-emitting materials, parametric design, sensor networks, and intelligent interfaces promise to spawn entirely new user experiences that will redefine our relation with technology. These developments are opening up unprecedented opportunities for innovation and require us to re-examine and re-evaluate some of the most basic user interface design principles.

For Project 3, 2e will design Tangible Visualization for Body Interface exploring future interactive designs and applications. Body interface can be designed as a digital object, a wearable interface, an interactive event, experience, or performance and that carries sensory and emotional (affective) data.

Task : Design Tangible Visualization for Body Interface

> Project type: Wearable or Environmental

Project Due: April 2, 2012

Part 1 - Concept (2.5%)

- Develop a concept for a tangible visualization interface that can sense and communicate with the world in a subtle manner.
- The device needs to read, or perceive sensory data from the participants
- We have limited Sensory data for Project 3. However please consider this project as a prototype that may be expended for the final project.
- Touch sense is highly recommended for Project 3. Note touch may be sensed using several types of sensors
- Quality of senses
    - o Poetic or expressive responses such as tickling, shuddering, nudging, pressing, hugging: these verbs are suggestive of certain states but are not necessarily literal emotions.
    - o Humor or character responses that evoke a sense of personality
    - o Specific emotional states such as sadness, joy, etc.
    - o More ambient body states such as calm, peaceful, serene, willingness, awareness
    - o The communication could be visual, auditory, olfactory, taste, vestibular.
    - o For Project 3, please focus on visual sensory system (the object becomes a color, an image, transmits moving images, and changes the color of your skin or your hair).
    - o Kinetic movement might be considered. (The object moves in response, tightens its grip

on you, wiggles around, dances, etc.)

- Context of Art, Design, Toy, Game, etc.

Part 2 – Research (2.5%)

You need to do some research to illustrate the concept in two important ways: **conceptually**, and **technically.** On-line searches are best for this, or use other design sources you have at your disposal.

Part 3 – Implementation (12.5%)

You need to create an artifact based on your concept and research. If your project is too big to finish by April 2, you can create part of it. However it should be functional and should be easy to understand what the entire project look like.

- Tangible Visualization – Input/Output
- Input Sensor
- Output Behaviors – Actuation with experimental materials (light, sound, vibration, movement, etc.)
- Try to use materials to help to convey your concept
- Soldering, Sewing, Laser-cutting can be involved.
- Arduino Programming

Part 4 – Documentation (5%)

    All your progress

Part 5 - Presentation (2.5 %)

- Slide (5-6 pages)
- Use supporting images, drawings, schematics to illustrate
    o The form of the project, the use of space, the interaction
- Technical description
    o Input Sensors used
    o Output Actuators or Behaviours

Evaluation Criteria

Your project will be assessed based on these considerations.

1. Aesthetic / Functional
2. Conceptual

3. Technical

4. Material Experiment

Timeline

Week 8 – Concept Development, Research

Reading Break – Ordering parts

Week 9 – Working Session

Week 10 – Working Session

Week 11, April 2 (Monday) – Project 3 Presentation