



ANONYMOUS QUESTIONNAIRE

Department of Computer Science
2366 Main Mall
Vancouver, B.C. Canada V6T 1Z4
tel: (604) 822-3061
fax: (604) 822-4231

Project Title: Haptic design tools and applications (UBC Ethics #H13-01646)

Principal Investigator: Karon MacLean, Professor, Dept. of Computer Science, 604-822-8169

Co-Investigators: Oliver Schneider, Ph.D. Student, Dept. of Computer Science, 604-827-3982
Hasti Seifi, Ph.D. Student, Dept. of Computer Science, 778-989-1650

This **anonymous questionnaire** gathers feedback to inform the design of haptic (sense of touch) design tools. This may be in response to a demo or presentation; if so, interacting with any tools will not have any risks beyond normal computer use. Results will help us improve our tools and understand the haptic design process. **You are not obligated to respond to every question below. Please feel free to ask the experimenter any questions you have.** Completing the questionnaire will demonstrate that you give your consent for data to be analyzed and published to the research community. We are very grateful for your participation!

If you have any concerns about your treatment or rights as a research participant, you may contact the Research Subject Info Line in the UBC Office of Research Services at 604-822-8598.

1. Which of the following tools have you used to work with haptics? (Please check all that apply)

a. Programming:

- i. C/C++
- ii. C#, .NET
- iii. Objective C or iOS programming
- iv. Java
- v. Android
- vi. HTML
- vii. CSS
- viii. JavaScript
- ix. PHP
- x. Python
- xi. Ruby
- xii. Perl
- xiii. MatLab
- xiv. R statistical programming language
- xv. Arduino
- xvi. Other micro controllers (please specify)
- xvii. ROS (Robot Operating System)
- xviii. Phantom OMNI?

- xix. GUIs
 - xx. Other:
 - b. Communication/networking
 - i. Bluetooth
 - ii. Wifi
 - iii. USB
 - iv. Firewire
 - v. Serial ports
 - vi. Parallel ports
 - vii. Other:
 - c. Physical
 - i. Sculpting materials (clay, plastecine, etc.)
 - ii. Wood and related tools
 - iii. Metal and related tools
 - iv. Glass and related tools
 - v. Cloth, leather, and related tools
 - vi. Haptic sketches (rapid ideation using physical materials)
 - vii. Basic electronics (breadboards, resistors)
 - viii. Laser cutters
 - ix. 3D printers
 - x. Stationary (paper, pencils, household objects)
 - d. *Actuation technologies*
 - i. *Universal (brush) motors*
 - ii. *Solenoids*
 - iii. *Piezo-actuated materials*
 - iv. *Infrared*
 - v. *Light sensors*
 - e. *Sensing technologies*
- 2. What size scale have you worked with? (check all that apply)
 - a. Less than 1 cm cubed
 - b. Between 1 cm and 5 cm cubed
 - c. Between 5cm and 10cm cubed
 - d. Between 10cm and 25 cm cubed
 - e. Between 25cm and 50 cm cubed
 - f. Between 50cm and 1m cubed
- 3. What size are your project teams, approximately? (check all that apply)
 - a. 1 person

- b. 2 people
 - c. 3-5 people
 - d. 6-10 people
 - e. 11-20 people
 - f. 21-50 people
 - g. 51+ people
4. If applicable, in what ways do you evaluate haptics? (check all that apply)
- a. In-house testing and piloting with people on the development team
 - b. In-lab user studies (bringing people in lab)
 - c. In-situ user studies (bringing devices or sensations to people)
 - d. Real-world (deploying products)
 - e. Quantitative tests (statistics and measurements)
 - f. Qualitative inquiry (interviews and observations)
5. Rate the importance (your interest) in customization for each of the following applications (1= not important/interested at all, 5= extremely important/interested):
- | | | | | | |
|--|---|---|---|---|---|
| a. Tactile smiley icons | 1 | 2 | 3 | 4 | 5 |
| b. presentation timing and notifications | 1 | 2 | 3 | 4 | 5 |
| c. exercise notifications | 1 | 2 | 3 | 4 | 5 |
| d. cellphone notifications | 1 | 2 | 3 | 4 | 5 |
| e. prototyping | 1 | 2 | 3 | 4 | 5 |
6. Which methods/tool(s) would you use in each scenario (check all that apply)
- a. Tactile smiley icons
 - i. Choosing from a pre-designed set (Choice interface)
 - ii. Using sliders to change overall qualities of stimuli (Filter interface)
 - iii. changing stimuli by using short pre-designed stimuli blocks (Block interface)
 - iv. freeform designing of stimuli (mHive)
 - b. presentation timing and notifications
 - i. Choosing from a pre-designed set (Choice interface)
 - ii. Using sliders to change overall qualities of stimuli (Filter interface)
 - iii. changing stimuli by using short pre-designed stimuli blocks (Block interface)
 - iv. freeform designing of stimuli (mHive)
 - c. exercise notifications
 - i. Choosing from a pre-designed set (Choice interface)
 - ii. Using sliders to change overall qualities of stimuli (Filter interface)
 - iii. changing stimuli by using short pre-designed stimuli blocks (Block interface)
 - iv. freeform designing of stimuli (mHive)

d. cellphone notifications

- i. Choosing from a pre-designed set (Choice interface)
- ii. Using sliders to change overall qualities of stimuli (Filter interface)
- iii. changing stimuli by using short pre-designed stimuli blocks (Block interface)
- iv. freeform designing of stimuli (mHive)

e. prototyping

- i. Choosing from a pre-designed set (Choice interface)
- ii. Using sliders to change overall qualities of stimuli (Filter interface)
- iii. changing stimuli by using short pre-designed stimuli blocks (Block interface)
- iv. freeform designing of stimuli (mHive)

Comment:

7. Rate the appropriateness of stimuli (initial stimuli, stimuli blocks, filters) for each of the following applications (1=not appropriate at all, 5=very appropriate):

a. Tactile smiley icons	1	2	3	4	5
b. presentation timing and notifications	1	2	3	4	5
c. exercise notifications	1	2	3	4	5
d. cellphone notifications	1	2	3	4	5
e. prototyping	1	2	3	4	5

8. Any other comments or applications: