Week 8: Haptics Projects

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Discussion

• What impressed you about your virtual environments rendered on your Hapkit?

• What did not impress you?

• How might you make it better?
Project

• Goal: Create a haptic device and accompanying haptic experience (rendering, user interface, or augmented reality) that is different from the standard Hapkit/Haplink

• Materials: Your Haplink parts + materials you purchase on your own + materials borrowed from Allison

• Timeline:

11/14 Project assigned; consult with Allison and course assistants. **Deliverable:** Form a 2 or 3-person team
11/16 Work with your project partners on proposal. **Deliverable (at 2:15 pm):** Project proposal (5-minute presentation w/description, sketches, timeline), get feedback
11/28 Work on project, consult with Allison and course assistants (and also coaches!) **Deliverable:** Non-functional physical prototype (show in class)
11/30 Work on project **Deliverable:** Moving prototype (show in class)
12/5 Work on project.
12/7 Haptics Open House + discussion. **Deliverable:** Demonstrate project to public
12/14 **Deliverable:** Final Report via wiki page due at 5 pm

   http://charm.stanford.edu/ME20N2017/, username: ME20NStudent, password: (to be announced)
Discussion

• What new things do you want to try in the field of haptics?

• What kinds of applications of Hapkits are you interested in?
New things you can learn/try

• Teleoperation (uses two Hapkits)
• Vibration feedback (uses small vibration motor or existing motor)
• Use force sensitive resistor for input
• Create a compelling new graphical display to accompany a haptic rendering
• Program your Hapkit to display a compelling, realistic haptic virtual environment that is different from the ones we have done so far
Proposal Presentation
(for Thursday)

• **Slide 1:** Description (motivation, concept)

• **Slide 2:** Sketches (I suggest pictures of hand drawings)

• **Slide 3:** Timeline (what tasks will you do, and by when?)