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?)