Application Programming Interface (API) for the Haptic Tabletop Puck

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Touch is everything!

Touch interfaces are becoming increasingly ubiquitous, so our hands and fingers are becoming more **engaged** in the computing experience.

When we feel a topographic map, we immediately recognize the relief through **haptic feedback**.
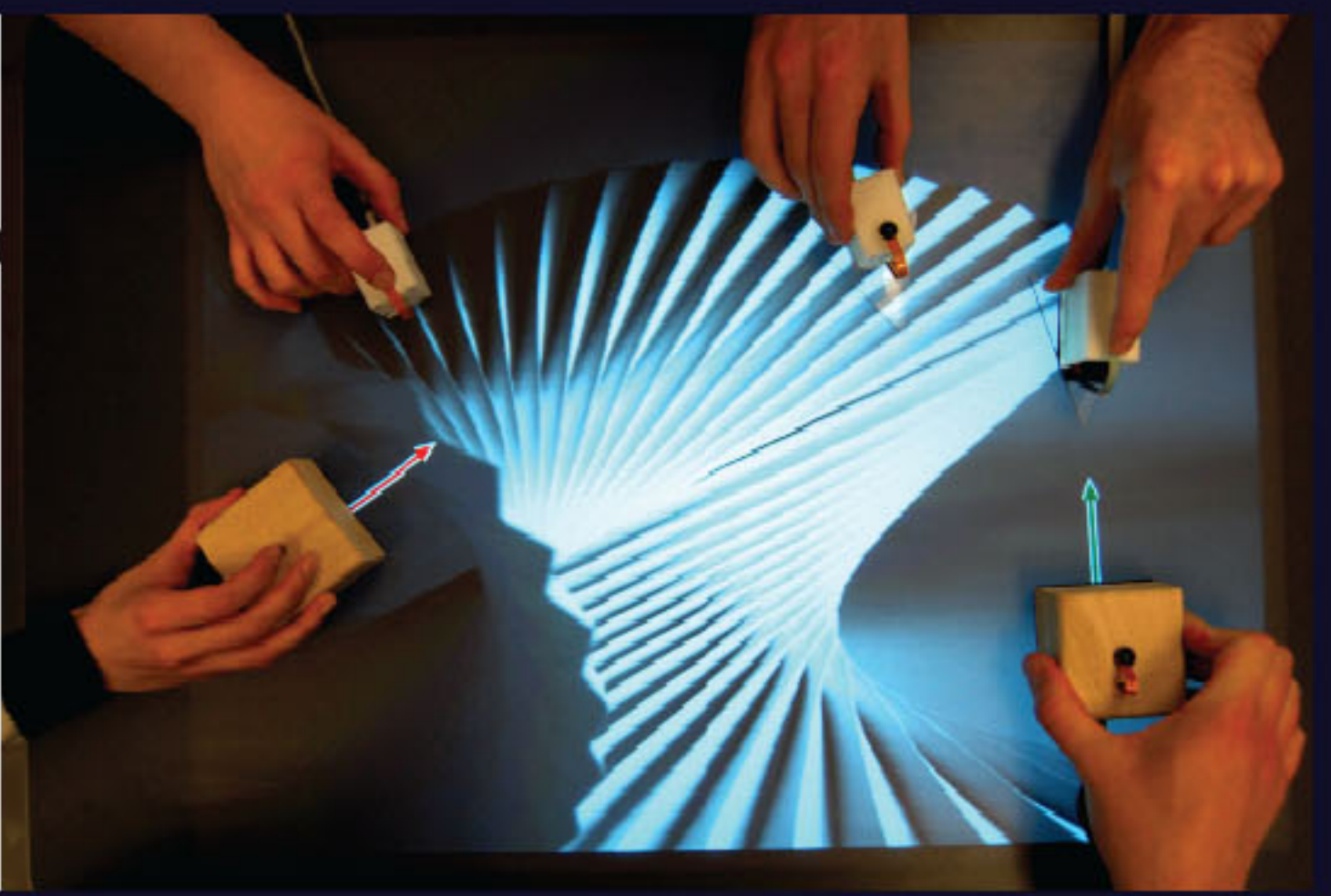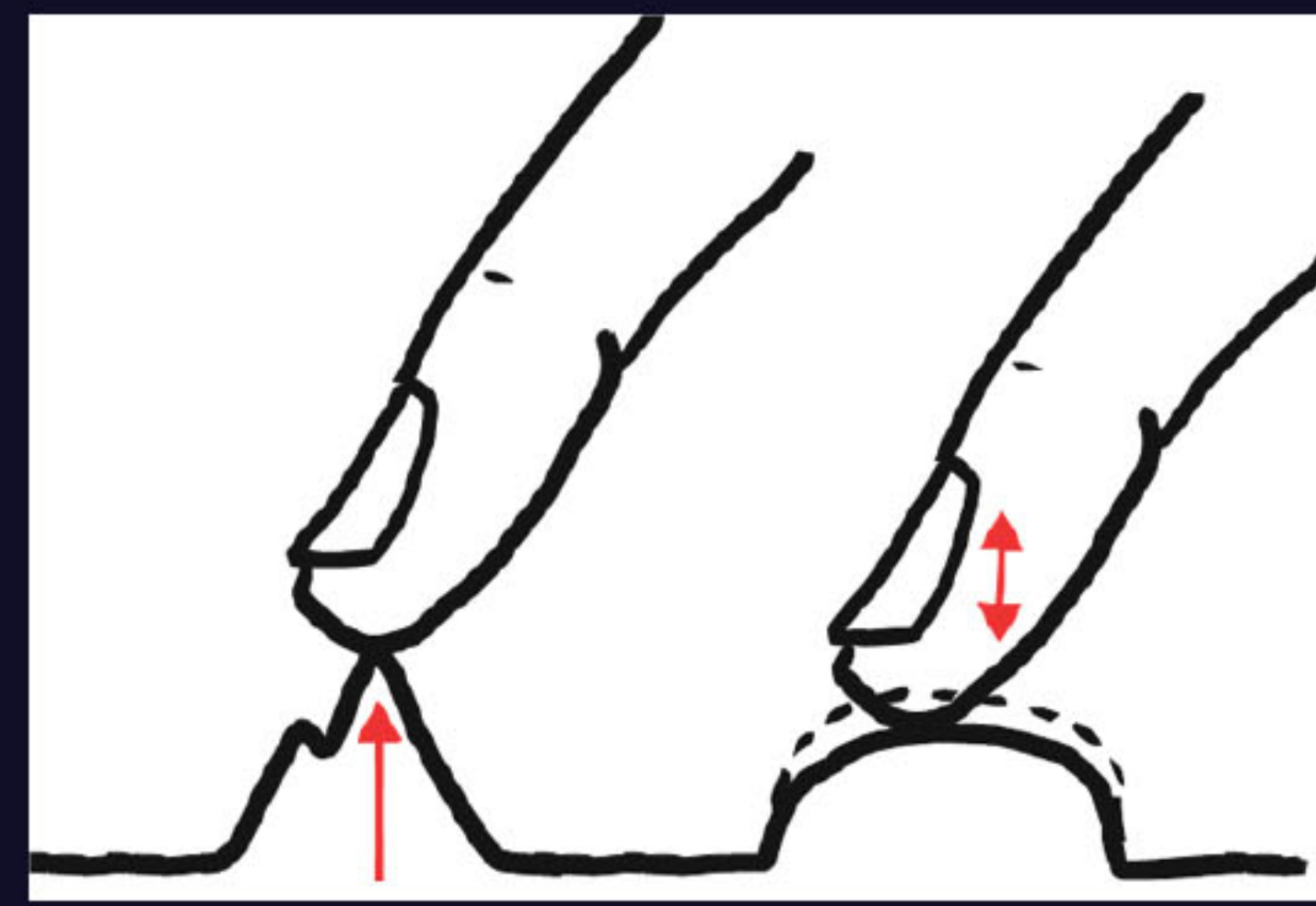
When interacting with a digital table, the texture is **flat** and **static**, and does not represent the information displayed on the screen.

We created the Haptic Tabletop Puck (HTP) to solve this problem.
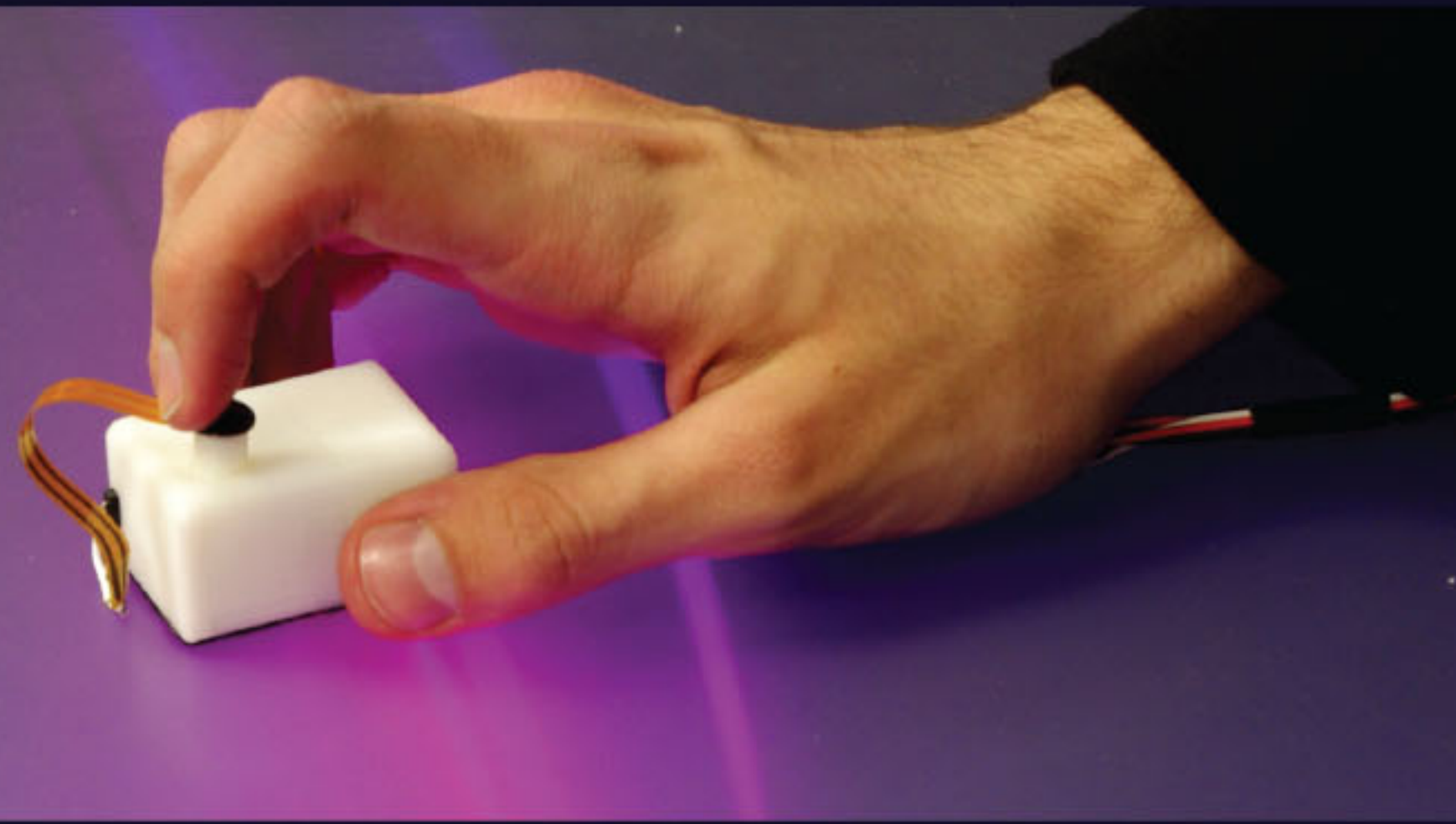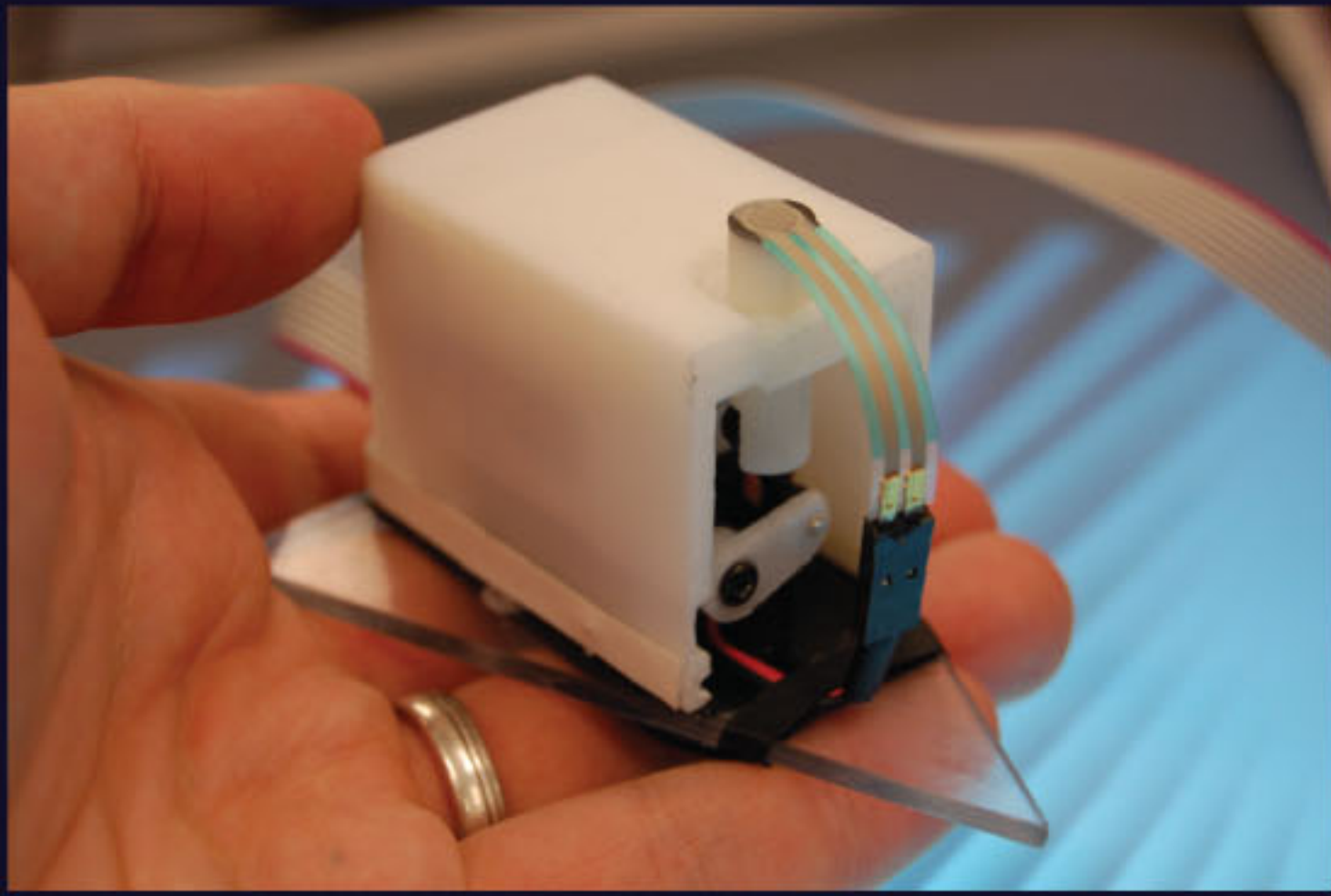
The HTP consists of a vertical rod that moves up and down attached to a motor. It also has a pressure sensor on the top of the rod.

The HTP simulates **haptic feedback** by changing the position of the rod. It can be used to analyze heights as well as recreate textures through a feedback loop between the motor and the sensor.

Programming can be difficult. Our API simplifies this process drastically.

It allows a wide range of haptic applications to be created.

Topographic applications where feedback can be used to feel the **relief**, as well as different **textures** representing the different kinds of terrain.

Exploration of **change of heights** within a visual creates the illusion that the actual physical object is present, or is recognized as part of the table rather than just a displayed image.
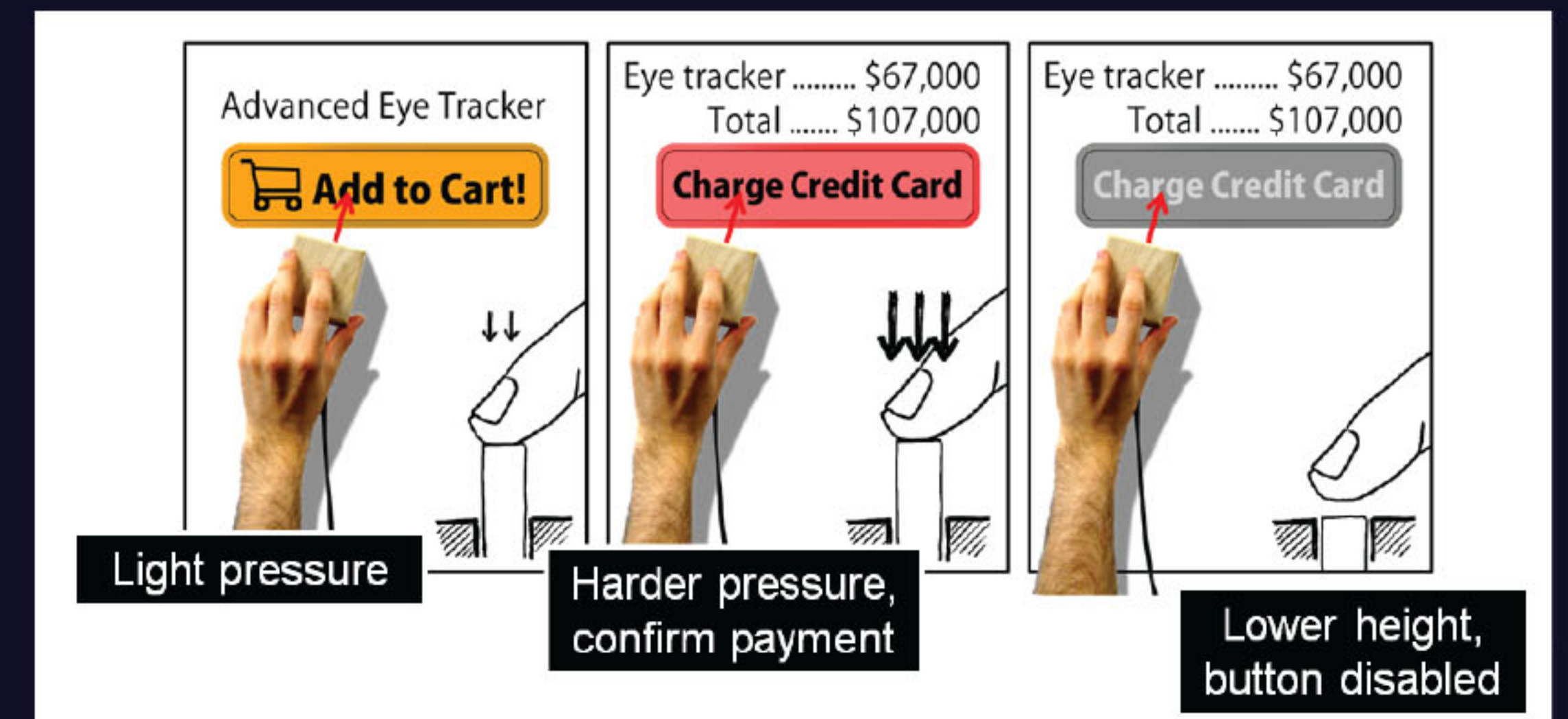
Conviction widgets, where the puck changes **resistance** depending on the state of the button.