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Final Project Abstract

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Ultrasonic haptic feedback uses modulated ultrasound to cause vibrations in the user's hand. It can be used to make it feel like there is an object floating above the transducers, a point of resistance in midair. It is currently being explored as a new way of interacting with software interfaces.

We will build a small phased array of 40kHz ultrasonic transducers. The project will be broken up into individually demonstrable subsystems (power supply, control logic, transducer driver, etc.), and we will each complete some of these subsystems. If we succeed in building an array with a single perceptible focal point, we will attempt to implement controls to change the position of the focal point.