Universal GPS Watch

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Global Positioning Systems (GPS) use multiple space-based satellites and a GPS receiver to calculate your position on earth. Navigation is as simple as entering an address after which the software will take you there through both a visual display and audible commands. Unfortunately, there are people who may not be able to look at their GPS unit and/or not be able to hear it. These physical limitations can be due to the activity the person is engaged in, the environment, or possible physical or mental impairment. The goal of my project ”The Universal GPS Watch” is to develop a wearable GPS unit that can give you directions in a form that is usable by almost everyone in almost any situation. To accomplish my objective, I combined a small electronics platform called the Flora developed for wearable electronics and a small circuit board that can receive GPS signals. To these two electronic parts, I added two vibration motors and motor drivers. The motor drivers allow the boards to give different vibrations as specified by my computer code. The wearable device is able to, when given the location of a destination, vibrate in different ways to tell you to go “left”, “right”, “forward, or “turn around” to guide you to your destination.

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