Energy Design Project

The Surge – Maximizing Energy

Mission Statement

This research project focuses on harvesting energy released through vibrations [mechanical energy]. Using electrical components called “piezos” the team will create a cell phone case to convert vibrations from the normal movement of a cell phone into usable electrical energy.

Synopsis

The main scope of this project is to try to improve upon the Surge device for harvesting energy using better materials and innovative equipment. We sought to develop a cell phone case that is capable of harvesting the energy created through the vibrations of normal cell phone use. That harvested energy would then be converted to provide an energy source for other uses. This would create a free, clean and renewable energy source. As part of this project, we investigated the use of piezoelectricity, the best materials for the cell phone case, and the utilization of the Arduino board.

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