ENERGY HARVESTING POWER FLOWER BELL – A CYBERNETIC SOUND INSTALLATION DRIVEN BY A DIRT-BATTERY

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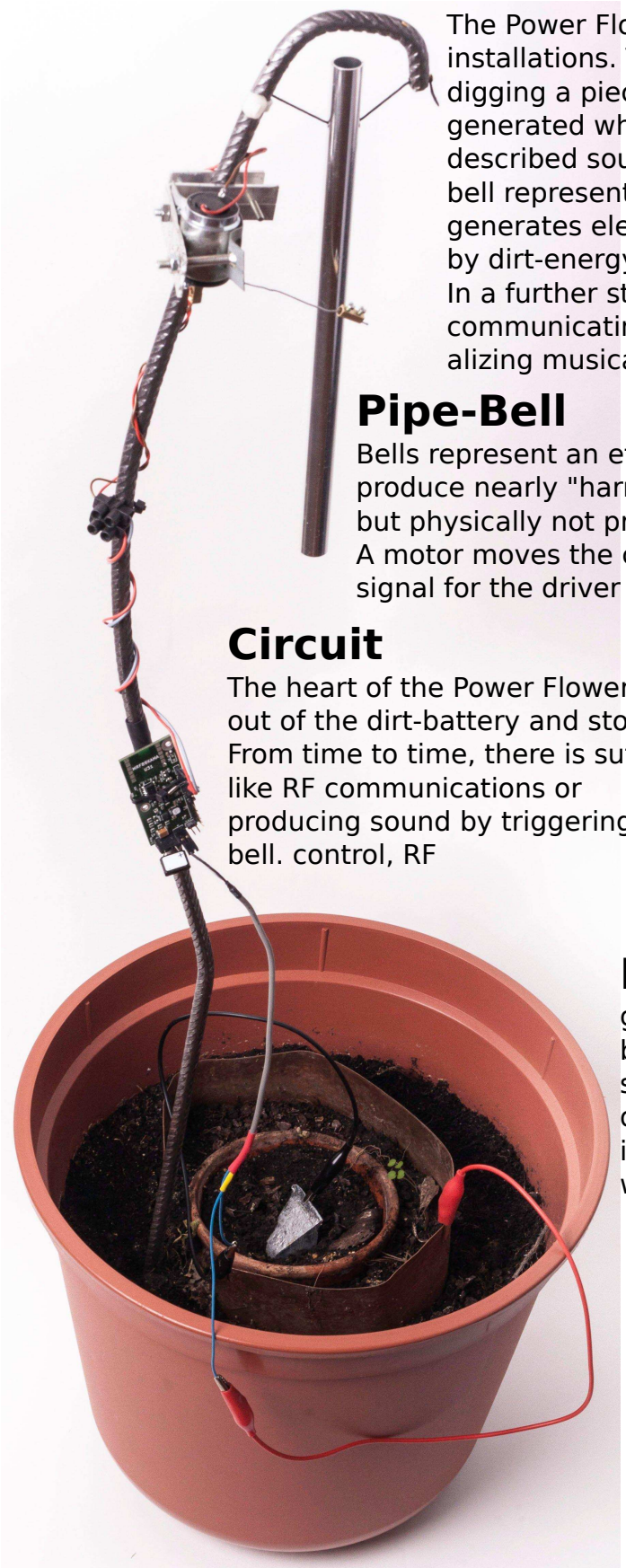


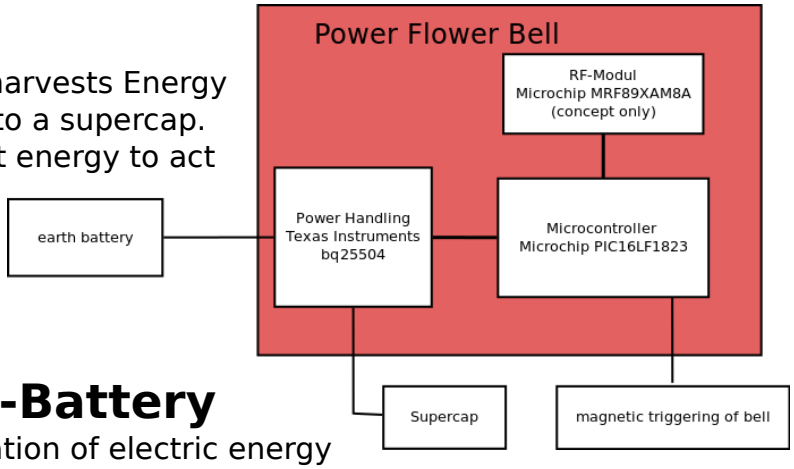
The Power Flower Bell (PFB) is an energy harvesting system for sound installations. The used energy source is a dirt-battery. It is built by digging a piece of copper and a piece of zinc into a soil. Sound is generated when there is sufficient energy to trigger a bell. In the described sound installation, such a system looks like a flower and the bell represents its bloom. With its roots (electrodes) dug into the soil, it generates electrical energy to make sound. It is possible to make sound by dirt-energy.
In a further step, many of such devices should be spread in a meadow, communicating with low-power Radio Frequency (RF) technology, realizing musical compositions.

Pipe-Bell

Bells represent an efficient way of sound generation. Pipe bells are known to produce nearly "harmonious partials". A fundamental frequency is heard, but physically not present.
A motor moves the clapper that strikes the bell. Shaping the control signal for the driver transistor of the motor, different sounds can be produced.

Circuit

The heart of the Power Flower Bell harvests Energy out of the dirt-battery and stores it to a supercap. From time to time, there is sufficient energy to act like RF communications or producing sound by triggering the bell. control, RF



Dirt-Battery

generation of electric energy by a electrode of copper and one of zinc, duginto soil, seperated by clay and forming a redox-reaction that delivers electric energy. To activate the reaction, humidy is necessary, so it is essential for a Power Flower Bell to be watered.