Investigating the Biological Impacts of Radio Spectrum Transmissions

The bee project group

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Objectives & Current Phase

- Bees use Earth’s magnetic field for navigation and orientation.
- Explore if RF(Radio Frequencies) has any impact on the behaviors of the bees.

What we have done so far:

- A Method to conduct the experiment.
- A prototype for magnetic field sensing (using a magnetometer)
- Basic equipment design: camera, feeder pump
Tasks completed/on-going this week

- The PIP Tag currently collects the data and transmit them to a nearby computer.
Tasks completed/on-going this week
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- Familiarize with Eagle software and went through tutorials.
- Able to make 1. Schematic Design.
  2. Printed Circuit Board Layout.
  through Eagle.
- Build a simple project (2 LEDs with LM55D timer) through Eagle.

Detail shown in next slides in Figure 1, 2, 3.
Tasks completed/on-going this week

Figure 1: Schematic Design

Figure 2: PCB Layout directly converted from figure 1.

Figure 3: PCB Layout after adjustment
Goal Next Week

- Collect the dimensions for the circuit board we already have and work on our PCB board based on the dimensions and the positions of the pins.

- Magnetic field source design.
Questions?