

Projects of Possible Interest

5 Design Projects

Project 1 (5/5): Amateur Radio SDR-based Repeater

Proposer: Erik Thompson

Potential Contributions:

- Programming, user interface, and protocol
- RF design considerations
- Implementation and test

Suggestions:

- Use Python instead of Java/C# for high-level interface – free, fewer lines of code, cross-platform, native graphics libraries. C or C++ for low-level protocol-type code
- Be Linux Compatible, scripting/command-line capabilities

Willingness to Work on the Project: Yes

Project 2 (4/5): Class Bluetooth Headset

Proposer: Lorenzo Allas

Potential Contributions:

- Firmware programming
- Hardware Design considerations
- Implementation and test
- Project Management

Suggestions:

- Consider a table-top implementation. The table-top box would receive information from the transceiver at the front of the room, and allow users to plug in their own headphones to listen. Bluetooth is cheaper than running audio cables, and it will prevent people from destroying the devices out of the inevitable boredom they experience in class

Willingness to Work on the Project: Yes

Project 3 (3/5): Last Man Heat Sensor

Proposer: Lauren Gutierrez

Potential Contributions:

- Firmware Programming
- Hardware design/circuit design
- Implementation and test

Suggestions:

- Have multiple sensors, which deliver stronger/weaker impulses to indicate the approximate direction in which the heat signature is detected

Willingness to Work on the Project: Yes

Project 4 (2/5): Smartphone Infrared Thermometer

Proposer: Dan Nowak

Potential Contributions:

- Programming, user interface, and protocol
- Hardware implementation

Suggestions:

- Research how well this could be done using the onboard hardware of a smartphone, or a simple modification to the camera unit. It may be more feasible than developing an add-on for a smartphone.

Willingness to Work on the Project: Yes

Project 5 (1/5): Inductive Mouse Pad

Proposer: Ryan Wilson

Potential Contributions:

- Research
- Implementation and test
- Project management

Suggestions:

- Consider creating a set of AA,AAA etc... size batteries that would charge from such distance, and market the idea to other battery-powered consumer electronics as well

Willingness to Work on the Project: Yes

I pledge my honor that I have abided by the Stevens Honor System