

Bryan Bonnet 2/4/14

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

Interest #5 – Barresi – Fault Tolerant Circuits Using Evolutionary Mechanisms

- I have experience working with embedded hardware, in particular FPGAs. I would be able to offer practical experience gained from previous work experience in this area. I am capable of programming VHDL which would come in use during the project.
- In order to minimize possibility of fault, the OM1 and OM2 can switch roles periodically from test vector to active input and vice-versa. This will allow for a more distributed load on both operational modules. Also, it will allow for checking each module without ceasing operation to run a test.
- I would be willing to work on this project throughout the semester. I am extremely interested in the evolution of FPGA and other reconfigurable embedded systems.

Interest #4 – Wahl – Cognitive Jammer for IED Detection and Mitigation

- I have taken several classes involving wireless communication. I have learned about several SDR and cognitive radio techniques that might apply in this project. Also, I have worked on wireless communications projects at a previous co-op and I can use that experience in this project.
- In addition to jamming the potential threat, I think this project can incorporate system for determining the exact location of threat and trigger using spectrum analysis.
- I would be willing to working on this project over the semester as I am very interested in working on cognitive radio projects.

Interest #3 – Williams – Automated Security Mass Transit

- I can contribute some knowledge of physical security systems. Also, I have interest in working with machine learning which can potentially be used in the project.
- I think that using machine learning coupled with image processing is the best way to go about this project. The project can use these methods to detect suspicious behavior by capturing known activities.
- I would be willing to working on this project over the semester.

Interest #2 – Gasbarro – Digitized Medical Records Assistant

- I have experience working in a hospital environment and will be able to provide insight into the operations end of this project. I have an understanding of how existing health care IT systems are configured and can help explore how this project would find opportunities from current weaknesses.
- At this time, the project seems quite broad. I would suggest that the team focus on a smaller selection of technology so that the team isn't attempting to solve too much at one time.
- I would be willing to working on this project over the semester.

Interest #1 – Meagher – Distracted Driving Sensor

- This project is centralized around an embedded sensor array to be integrated into a vehicle. I have experience working on embedded systems and could offer that information to the group when designing the system.
- It may be hard to create a generalized “black box” system for all vehicle make and models so a subset should be chosen to simplify the integration process.
- I would be willing to working on this project over the semester.