IEEE Student Branch – Meeting Minutes
May 3 2012

Members in Attendance:
Erin Johnston, Nicholas Kroeker, Jason Long, Devyn Farr

Minutes:
Engenuics founder Jason Long visited from Calgary. He is the mastermind behind the MPG program which Erin Johnston, a UBC Okanagan Master's student taught for the first time this year at our campus. Nicholas Kroeker, the new MPG director for 2012-2013 was on hand as well to discuss the curriculum with Jason and Erin.

Jason is a long-standing IEEE member and is experienced with the MLRC program, having been a part of the UofC MLRC when he was an undergraduate. His advice on matters MLRC is valuable!

Funding for branch events which may forward the MPG program in any way. Ask Jason for contacts and funding opportunities. He has contact with program heads at the university as well as within IEEE and is a valuable source of information as well as funding.

The program can be run like an interest group rather than a lecture. The director doesn't need to have all the answers as long as they can steer the group towards finding their own solutions. This can often be a more effective way to teach.
-expose the student to problems which still need innovative solutions, not just to problems which have been solved already (although both can be instructive). Need to inspire the next generation of problem solving, not just more of the same.
-LVL1 is geared towards 2nd year students
-LVL2 is geared towards 3rd year or higher students.
-unfortunately due to the nature of the 2 common years at UBCO it seems like second year students with an interest in electrical engineering are at a disadvantage when it comes to exposure to fundamental electrical skills. The IEEE student branch is well positioned to offer just that kind of exposure.

Nic suggested the need for a Pre-MPG program to let students learn the kind of lab skills which they don't seem to be collecting in their courses.
-project ideas, POV, circuit board design/etching, light activated alarm, audio visualization, ant-radio texting device
-students buy the kit and keep the end product.
-sell the kit, teach them to build it.
-skills with lab equipment, power supplies, meters, soldering, identifying components, useful circuits, debugging skills.

Jason emphasized the importance of showing the reality of development. Students shouldn't be protected completely from the complexity of electronics development or they might become frustrated and quit early. Conversely, the material shouldn't be presented as insurmountably difficult. Present the truth. Don't sugar coat it and don't use scare tactics.
-use examples for everything. Small intermediate examples which don't give away the whole solution to the final problem, but which may be adapted and contribute to the final solution.

Jason has a list of possible Capstone projects which are tied in to the knowledge gained from MPG. Contact him when the time comes to select a project. SOE may be interested to include him in their process of project selection.

MPG open house to encourage involvement from industry. Invite industry personnel to attend a class (perhaps a soldering class or one of the more interesting programming classes). Encourage companies to use MPG students for their extra experience. Ask for it on resumes. Ask them to perhaps teach a topic relevant to them and somehow related to MPG.

Industry Sponsor (Jack Van der Star).
-make sure to keep him up to date with the program details so he can talk it up in industry. Encourage him to discuss the program with his colleagues as well as Accelerate Okanagan. That organization may be a valuable source of funding and expertise for the MPG program.
-make sure to present the course material in such a way that they don't overlook the amount of work that went into even simple student projects and learning.

PUBLICITY!
-keep campus media in the loop wrt our activities.
-post videos and stories about our activities online.
-use the engenuics facebook group, ieee student branch website, youtube. As necessary to publicize our activities.
-Publicize the course projects, show off their results and the competition as much as possible.

Organizers are encouraged to include their name in any publicity. Its important that they receive rewards for their effort and notoriety is valuable.

Jason believes that two attendees for IEEE congress is valuable. MPG stands to gain a lot from the event and its important that the Chair attend for the sake of the branch.
-PAF funding should be available for this. Renee Leboe confirmed that this is the correct avenue for funding although there may be difficulty in receiving funding for Nic, who is not an engineering student. Is there a funding program within the computer science department which he could use?
-Jason may be able to use his connections to increase the chances of funding from the university or even from IEEE.

Use the MLRC and MPG programs to follow up on workshops. Get students interested with workshops, then follow up with a lab session or an MPG lecture.
-would require coordination between the different groups. Matlab workshop on input serial data acquisition. Follow with MPG lecture on serial protocol and an example. Use the knowledge from both to build a sensor input which matlab processes in the MLRC lab. For example.
-the workshops could be used to augment the lab. Encourage students interested in some hardware lab to attend the precursor software workshop. Welcome to attend one and not the other of course. Direct people to the clubs after the workshop.
-how to program a digital controller then send the students to the MLRC to build the hardware which the software will control.

Involve elementary schools as often as possible. Invite them to attend can-crusher, mpg year-end competition, edible car. Run activities just for elementary students which MPG or MLRC lab groups teach. Good for both groups.

Okanagan springs offers sponsorships to club activities and events. See website.

Soldering race video (see Heather).