

Title: 2013 Engineering Hui

Name of the Proposer: Professor Dale Carnegie, Victoria University of Wellington

Number of participants: Over 120 students (14-18 years old) and 30 teachers from 26 colleges

Budget Spending:

A sum of NZ\$5000 was provided to Victoria University from IEEE CAS for the event. The IEEE CAS contribution was used primarily to fund the production of a series of modified arduino boards that were given out to all attendees. A summary of event expenses is included below.

Expenses:

Catering	\$3545
Drinks and service	\$565
Rooms	
Lecture Theatre @ \$300 per hour (x4 hrs)	\$1200
3x ECS laboratories (x5 hrs)	\$1500
Staff Time	
Event (11 staff for 4 hours @ \$35 per hour)	\$1540
Marketing/Preparation (40 hours at \$35 per hr)	\$1400
Wifi Pinapples(\$250 ea x4)	\$1000
Giveaways:	
quizmaster arduino boards(x150 @ \$30 ea)	\$4500
board assembly cost (x150 @ \$3)	\$450
hoodies (x30 @ \$40 ea)	\$1200
t-shirts (x50 @\$25 ea)	\$1250
posters (x50 @ \$10 ea)	\$500
Total Cost	\$18,050

Sponsors:

IEEE Sponsorship	\$5000
Victoria University Engineering Department	\$13,050

Activity description:

The 2013 Engineering Hui, hosted at Victoria University on the evening of Thursday the 17th October, attracted over 150 students and teachers from 26 schools across the Wellington region (from as far away as the Kapiti coast and Upper Hutt). Students were introduced to the engineering programme and requirements for studying a BE at Victoria University and participated in three different hands-on activities, with the three activities chosen reflected the Engineering majors available to Victoria University engineering students:

- Building an infra-red computer interface with arduino and processing
- Investigating network security and transfer protocols with Wireshark and command line tools

- Building a digital cityscape and battlestar from code using processing

Attendees were split into groups of no more than 20 per groups accompanied at each activity by at least 2 engineering school staff. In addition students were informed about Engineering career pathways by two speakers from FutureinTech an initiative run by the IPENZ (Institute of Professional Engineers New Zealand). Feedback was almost uniformly positive with both students and teachers giving a strong recommendation (>80%) for others to attend future events. The event attracted students with a wide variety of interests beyond simple programming, including artists and musicians.

In the words of one student that attended:

“This is one of the coolest things I have been to because I actually got some hands on experience. The only downside was that it was too short.”

The 30 careers advisors and science, mathematics and digital technologies teachers that attended were given a thorough explanation of the requirements for entry to the BE. They were given the opportunity to request the development of specific engineering teaching resources with the ECS outreach staff and were shown how programming can be relevant to teaching physics and mathematics at the high school level.

During dinner attendees were also shown some of the Engineering school’s graduate student projects including MechBass (a robotics bass guitar), a variety of robots produced by the school and the local robotics club (which they were invited to join) and various physics demonstrations. The dinner session also afforded student some face time with which to talk to engineering faculty staff and students about their interests and concerns around pursuing engineering in the future, with several reporting that this time was some of the most helpful to them.

The Engineering Hui was advertised to all colleges teaching year 11-13 students in the Greater Wellington region, comprising a total of 51 colleges. Marketing was performed by contacting school administrators, Heads of Science, Digital Technologies and Mathematics and through existing relationships with teachers. Of these colleges, 34 were within a reasonable travel distance of the Hui location (i.e. less than an hour by public transport) with 26 ultimately attending the hui. For distant colleges, or those from low decile areas, the offer was made to arrange and/or travel to enable participants to attend the event. All colleges that did not respond to the first round of marketing were followed up by phone call, as were those colleges that replied negatively to the invitation. In addition, a VUW part-time staff member spent the month preceding the Hui physically attending colleges and advertising it both via one-on-one conversations with students and larger talks at assemblies and science clubs. The event was also marketed through social media.

IEEE CASS Promotion:

All attendees were requested to provide feedback on the Hui in the form of an online survey, and attendee names and contact details were retained for future reference. All correspondence with

attendees, all advertising material, all slides and handouts included the IEEE CASS logo and links to the main CASS site where possible with instructions on how to join CASS. (Examples are included as appendices). IEEE CASS was thanked and described at both the beginning and end of the event.

Appendices:

[Example promotional Material featuring IEEE CASS Logo](#)

Example slide featuring IEEE CASS Logo:

What are we going to do???

A bit of an introduction to Engineering at VUW.

Meet some of our Engineering Rockstars.

We will then separate into groups and go to the different hands on sessions.

