



The 2009 C2C Expo will be held on Wednesday 4 November 10.30-1.30 pm at the Golden Grove Arts & Recreation Centre, Golden Way, Golden Grove. For more information contact the NAMIG office.

### NAMIG Review

A well attended Annual Review meeting was held on Friday 16 October. Professor Andrew Beer presented the preliminary findings of the evaluation of the C2C program that is currently being undertaken by Flinders University. Besides noting positive feedback from students and teachers, Andrew suggested that NAMIG consider strategies for:

- Re-emphasising the C2C brand
- Gaining effective change through small impact on a larger group by broadening rather than deepening programs.

Three young adults then complemented previous presentations by C2C students. They were able to deliver their perspectives as a buddy for scholarship recipients, a mentor for project teams and as a former student teacher involved in C2C now teaching at a C2C school.

Charles Homes, Chair of NAMIG, then facilitated a review session of the successes, challenges and future opportunities for NAMIG. This information will not only be utilised in future strategic planning but also in securing funding beyond 2010.

### NAMIG - an award winning program

In recent weeks, the great outcomes of the NAMIG industry-education partnership and the Concept2Creation suite of programs have gained recognition from a range of government and industry bodies. The most notable achievements being:

- Engineers Australia (SA Division) awarding NAMIG an Excellence Award for Leadership and Management and an extraordinary award for its contribution to education.
- The South Australian Science Awards listing NAMIG as a finalist in the Community Education section. More importantly it recognised Anita Trenwith (C2C teacher at Salisbury High school) with the Teaching Excellence Award.
- The newly formed Technology Industry Association (formerly E&ICTA) awarding NAMIG the Support For Education Award.

Such awards bring a lot of credibility to NAMIG and due recognition to the NAMIG operations team and its partners from industry, education and communication.



*Simon Butterworth (coordinator of RAAF-UAV challenge), Wing Commander, Mal Tutty (RAAF) and Bernie Fitzsimons (NAMIG General Manager) accept Engineers Australia awards from Doug Gillott (President, Engineers Australia SA)*

### Seeking Synergy

NAMIG has been in conversation with providers of other programs who also offer talks, tours and projects to schools. All parties agreed that by these parties working together and schools recognising the potential to integrate more than one program, students can experience enhancement to their education and career development as a coordinated process rather than a series of sometimes disjointed events.

In future, it is intended to present a map of providers to schools but it should be noted that UniSa has developed a Maths & Science Directory that assists in this process. This can be accessed at <http://www.unisa.edu/unap/Projects/Mathematicsandscience.asp>

In the meantime, schools can consider the benefit of integrating enhancements available from CSIRO, Engineers Australia, Technology Industries Association, Tall Poppies, SA Great and many others, along with C2C, to create a rich program across the years and curriculum.

### Engineers Without Borders Pilot...Another type of piloting in C2C!

Five member schools have enthusiastically piloted this EWB program that has previously only been undertaken by Engineering undergraduates. The brief is for student teams to develop a solution for a development problem in a third world community.

The focus for 2009 was on Cambodia and students have benefitted from an informative website and undergraduate mentors and speakers to initiate their projects. Some team projects are addressing water and sanitation, while others are tackling storage, shelter, energy and transport themes. We look forward to viewing the fruits of this pilot at the 2009 C2C Expo on 4 November and to some more complete projects in 2010.

Pilot schools are Para Hills High School, The Heights, Tyndale Christian School, Valley View Secondary School and Windsor Gardens Vocational College. It is envisaged that this project will provide an engaging introduction for students to then undertake other levels of C2C projects.

# NAMIG



*On behalf of NAMIG, Charles Homes receives the Technology Industry Association Award from Professor Andrew Parfitt.*

**Coming Events** (for full info contact the NAMIG office)

Tues 27 Oct 3.45-5.00  
C2C Teachers' Meeting,  
Temple Christian College

Friday 30 Oct 1.30-3.00  
UAV Presentations at UniSA

**Wed 4 Nov 10.30-1.30**  
**C2C Expo, Golden Grove**  
**Arts & Recreation Centre**

Tues 10 Nov Valley View  
Secondary School C2C Expo

Thur 12 Nov Riverton &  
District High School C2C  
Expo

Fri 20 Nov 9.30-11.30  
NAMIG AGM at the Mawson  
Centre



Application packs are now available for BAE/ NAMIG scholarships for relevant TAFE & University courses enrolling in 2010.

Contact NAMIG for details.

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**Featured Partner - Charles Homes, BAE Systems**

Charles Homes has been the chairperson of NAMIG for the past two years and besides providing leadership to the group, he provides an effective link to BAE Systems and the many forms of industry engagement that they provide for C2C schools. These include:-

- 3 scholarships for ex C2C participants moving into tertiary education, including mentorship and buddying support and a work placement component.
- Provision of young graduate engineers as project mentors.
- Tours to various BAE Systems sites in Adelaide.
- Development and delivery of small projects for junior students by graduate engineers.
- Partnering with RAAF for the UAV project for senior students.
- Partnering with Salisbury Council for the SWAT project for senior students.

Charles is currently Head of Systems Engineering at BAE Systems, so is a great proponent for the introductory Systems Engineering training that students and teachers receive prior to undertaking projects. This critical thinking process significantly enhances the application of project management skills and continually validates NAMIG's belief that "the learning is as much in the process as it is in the product".

Prior to working on various defence projects within BAE Systems, Charles has worked at Quiktrak Technologies on tracking and communications systems, Practel International doing broadcast TV and radio products and Austek Microsystems where he worked on the Australian Bionic Ear and various VLSI integrated circuits. Consequently, he brings wealth of knowledge to the concept and creation components of NAMIG programs. He would welcome the opportunity to discuss the many and varied forms of industry engagement available to other prospective industry partners.

**Clean Technology Day Launches Future Projects**

During September, 20 teachers joined NAMIG staff to experience an introduction to how clean technology and sustainable practice is being embraced by industry. A morning tour of Coopers Brewing provided insight into innovation being used in accessing water through desalination, regenerating power and of course in the brewing processes itself. Professor Wasim Saman then delivered a futuristic talk entitled "Vision for sustainable living" and a tour of the Sustainable Energy Research Centre at the University of South Australia. The third and final activity of the day was a visit to the Salisbury wetlands to hear of the current storm-water harvesting and future plans to create drinking quality water.



*Tom Bullock, Coopers Brewing, with participating teachers*

Schools are already adopting a Clean Technology focus for projects. One example is Valley View Secondary School's replication of a UniSA research project that uses porous paving to capture, filter and hold water in an underground tank that is linked to a moisture probe and solar-powered pump. Their long term plans are to water a patch that will grow feed for the panda bears at Adelaide Zoo.



*Bruce Naumann of the City Of Salisbury discussing storm-water harvesting and treatment*

**Lean & Authentic Contributions from GM Holden**

A recent Lean Manufacturing training day was hosted by GM Holden. In addition to delivering authentic industry training that can significantly prepare teachers for their management of student projects, this day did more. It was the first time that a composite group of teachers, undergraduate project mentors and employees had undertaken the lean manufacturing program. This created a rich mix of perspectives that further enhanced the event and the learning that all participants took away from the day.



In addition, Holden has further consolidated its commitment to NAMIG by introducing a new project for senior students. This project brief involves students developing a mechanism for tracking vehicles once they move off the production line. We are indebted to Holden for these ongoing contributions during testing times for the company.

