

Engineers Excellence Awards 2007

SPECIAL PROMOTION

building a better future

REPORTS BY KEELI CAMBOURNE

WELFARE, HEALTH, SAFETY, EDUCATION AND TRAINING

Everyone wants to lose a little weight and that includes the students who are part of this year's University of NSW solar racing team.

Unlike many of us, they can claim to have done it. Well, not them specifically but they did lower the weight of the Sunswift solar-powered car, which will this year enter the 20th World Solar Challenge.

Two years ago the Sunswift III crossed the line first in production class and ninth overall out of 20 international entries in the world-renowned challenge.

This year's model, the third completely new car from the UNSW team and the second modification of the Sunswift, is more than 10 kilograms lighter.

It may not seem like a lot of weight to lose in the production of a car, but the SunSwift III only weighed 220 kilograms to begin with. The 10 kilograms was lost through rigorous mathematical and engineering hard work.

All of it was done by UNSW students. The Sunswift project team is made up of 15 to 20 undergraduate and postgraduate students who volunteer their time to design, build, fund, manage and race the state-of-the-art solar car.

The Sunswift III is capable of travelling more than 800 kilometres a day, running on a 2 kW solar array and holds the transcontinental world record (Perth to Sydney).

The UNSW solar racing team gives students the opportunity to work on cutting-edge research and develop the engineering skills of students. With a 12-year history, it is the longest continuously run, student-led engineering project in Australia.

This year's project leader, Yael Augarten, says he enjoys watching the growing confidence of the students who join the team.

"When they start they are uncertain about what they know and how to apply it but by the end of the challenge they are in charge," he says.

"A lot of the things the UNSW Solar Project teams have developed for the car are now being used commercially, such as some of the technology used in electric cars.

"So really, the students involved in this project are working on technology that is 20 years ahead of its time."



PROFESSIONAL ENGINEER OF THE YEAR



JOHN GRILL

Founder and chief executive officer, WorleyParsons

The mining and energy boom of the past few years has seen John Grill recognised as one of Australia's top 100 most influential engineers in a *Business Review Weekly* list.

Grill didn't start off big. After graduating with honours in civil engineering from Sydney University, he joined Esso in 1968 before leaving to start a small engineering consultancy, Wholohan Grill, in 1971.

It became a leader in the fields of oil and gas, infrastructure, minerals, metals and power and, in 1987, Wholohan Grill acquired Worley Engineering Australia.

In 2002, the Worley Group listed on the Australian Stock Exchange and in 2004 acquired Parsons E&C Corporation to become WorleyParsons. The firm now operates out of 90 offices in more than 30 countries.

The Sunswift Project