Car with M’sian input going places

By MENG YEW CHOONG

THE NANYANG Technological University’s (NTU) award-winning electric car was the undoubted centre of attraction at this 12th QS-APPLE conference exhibition at Putrajaya last week.

The first 3D-printed electric car from Asia to take part in this year’s Shell Eco-marathon in Manila has some Malaysian input from the hands of Richmond Tan Wye Xin, 21, currently a third-year mechanical engineering student at NTU.

“A fellow Malaysian introduced this project to me during my fresh year. And that’s how I became interested in this 3D printed car called Nanyang Venture 8,” he said at the NTU booth at the conference.

Together with his teammate from Singapore, Ilim Abdul Wahab, 21, a first-year mechanical engineering student, they had been working on the electrical and electronic components of the car for the past two years.

Two, Ilim and five other students from various faculties of NTU spent four months building crowdsourced in Malaysia. The single printed car practically took up the whole day.

A comparison of a single car has been done every week when they learnt how to print 3D parts to make up the car, other than some steel and carbon fibre parts.

As it takes a whole day just to print a single part, they had to enlist the help of the private sector by borrowing their printers, an arrangement that no doubt reduced them to use their soft skills – persuade and negotiate.

For Tan, all the hard work has been worth it. After all, the car, named Nanyang Venture 8, won four awards at this year’s Shell Eco-marathon: top prize for Vehicle Design, Communications and Safety, as well as for the Urban Concept category (Germot) track said.

The Shell Eco-marathon Asia is an annual international car design competition, promoting teams from academia nationwide compete on fuel efficiency and performance.

Together with another NTU car, the Nanyang Venture 8 which won top awards – top for Technical Innovation and winner for the Prototype (Alternative Energy) was one of 17 entries under the 1.8m class.

With its six students, NTU emerged as the best performing university this year, turning in 184-km/litre, best performance.

Two prominent alumni the Putrajaya International Convention Centre to view what their ex-student had been doing.

“My parents were impressed by what they saw, and understood what I had been doing for the last two years,” said Ilim. Lampoo, born Tan, who is now an NTU after finishing A levels from Trinity College in Malaysia.

He gladly took the challenge of taking up four chairs to print and assemble the parts together with his Singaporean counterpart in less than an hour.

Ilim, who was also present at the Putrajaya exhibition, said five of them worked on the project.

“We have students from different schools of engineering. I think they’re the operating system, as well as the human interface of the car that included the motor and battery,” he said. As many were purchased off the shelf from various components manufacturers, the trick is to optimise them so they can fit into a paper-thin plan.

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“A lot of feedback is given as they are reporting to them,” said Ilim.

Armed Professor Tan Hoang Dieu, who monitored the students, said his charges had many innovative ideas to improve the cars.

“Not only did the students use their engineering knowledge, they also went beyond what they learnt in their curriculum to find ways to improve fuel efficiency and performance,” he said.

Several awards are proof of the students’ ingenuity, perseverance, determination, and their ability to blend in NTU pride.”

NTU’s College of Engineering is one of the world’s largest engineering colleges with six schools that offer a wide array of multidisciplinary programmes and specialisations.