Racing to build model race car

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Bangalore: "There's 80% to 90% difference between what we learn in class and what we learn from practical experience," BMS College of Engineering student Ashwini K S said after racing a model car at Freescale Cup India 2011, a race competition for students organized by Freescale Semiconductor at IISc on Monday. This is the second edition of the Cup. The first edition last year featured 22 colleges and 90 teams. The number of teams this time was 127.

"All students definitely need higher industrial, practical exposure along with theoretical learning. I now truly understand how difficult it is to get everything right in running a car on a race track," Ashwini said, speaking for students from 35 colleges who were at IISc to get battery-driven cars to complete a run along a neatly-laid out track. "I learnt so much more about automotive engineering in the three months I trained for the competition than in the entire academic year. You understand the practical working of each and every part and the pitfalls," Ashwini explained.

She and her friends from BMS, as well as students from Manipal Institute of Technology, were part of the two teams that successfully got their cars to complete the entire track. While Manipal students got their car to complete the track in around 30 seconds, BMS team did it in around 36 seconds.

The miniature cars were battery-driven and remote-controlled and raced on a track designed and set up on stage.

Andy Mastronardi of Freescale Semiconductor told TOI that the company's objective was to encourage practical understanding of automotive engineering among students. "The event is part of our global initiative to promote innovation among engineering students and offer them a hands-on opportunity to put their engineering skills to test," Mastronardi said.

They provide students the entire kit — controllers, camera, battery and chassis — free of cost. The students have to integrate these parts into a model car and ensure that the right signals are conveyed from the camera to the controllers so the car races correctly on the track. The integration also involves writing software to match the hardware. "If the software programming is not accurate, the cars tend to go off the tracks. Students need to spend lots of time on coding for operation of cars," said Mastronardi. Ashwini and her friends said students needed to understand the workings of controllers and have programming knowledge. "Else you won't be able to run the car. A good knowledge of software and hardware is crucial. The competition gives us exposure to both. From assembling and integration to programming, we are tested severely. Now I feel I am more industry-ready than before. I hope more and more practical contests like these are organized by our colleges."

THE WINNERS

1st prize: Team from SVNIT (Sardar Vallabhbhai National Institute of Technology, Surat) — Amit Tank, Atul Jariwala, Vivek Kholia — completed in 25.68 seconds

2nd: Team from Manipal University (Manipal) — Shabeer Ali, Sneha Joseph, Rajendra Babu — completed in 30.59 seconds

3rd: Another team from SVNIT (Surat) — Vivek Gandhi, Varun Chiddarwan, Vishal Jain — completed in 34.49 seconds

CONSOLATION PRIZES

- Team from BMS College of Engineering
- Team from Thapar University
- Another team from BMS College of Engineering

LEARNING ON THE JOB: The race competition's objective is to encourage practical understanding of automotive engineering among students

FREESCALE CONTEST

- Primarily involves universities and students
- Establishing industry-academia interface/lab is the aim
- Launched first in South Korea 7 years ago
- Taken to China 6 years ago. 1,700 teams participate
- Moves to Malaysia, Mexico, Brazil
- Plans to organize it in Japan and Taiwan next year