PRESS RELEASE

The Students from Slovak University of Technology Bratislava win EMEA Freescale Cup Challenge 2014

Erlangen, Germany, April 30, 2014 – European Final Cup Challenge competition took place on the campus of the Fraunhofer Institute for Integrated Circuits IIS in Erlangen (Germany). The student team FEI-minetors from Bratisvlava won the final round of the EMEA Freescale Cup Challenge 2014, hosted by the Fraunhofer Institute for Integrated Circuits IIS in Erlangen.

The Freescale Cup, sponsored by Freescale® Semiconductor, is a global competition where student teams build, program and race an intelligent model car around a track. The car is autonomous and must stay on the racetrack at all times. The fastest car to complete the track without going off the track wins the race. Cars are powered by Freescale microcontroller, which are state of the art products widely used in the industry. All cars shared the same chassis and motors and use similar batteries.

75 students, from 25 teams representing their respective universities from 11 European countries raced their cars on the 2014 Freescale Cup track at Fraunhofer IIS. The 180 sq/m racetrack consisted of speed bumps, intersections, hills and chicane curves.

The winner-team of the Freescale Cup EMEA 2014: FEI-minetors of the Slovak University of Technology Bratislava © Fraunhofer IIS/ Peter Roggenthin | More pictures in color and print quality: www.iis.fraunhofer.de/en/pr.

Students have been working for the past 6 months to assemble, program and test their vehicles. They had 1 ½ day to test and fine tune their vehicles to the race course before

Head of Corporate Communications
Thoralf Dietz | Phone +49 9131 776-1630 | thoralf.dietz@iis.fraunhofer.de | Fraunhofer Institute for Integrated Circuits IIS | Am Wolfsmantel 33 | 91058 Erlangen, Germany | www.iis.fraunhofer.de

Editorial notes
Verena Höltl | Phone +49 9131 776-1644 | verena.hoeltl@iis.fraunhofer.de | Fraunhofer Institute for Integrated Circuits IIS | www.iis.fraunhofer.de

the decisive race. During the training period, students had to demonstrate their car's ability to avoid obstacles, quickly accelerate and brake within a given distance.

The team FEI-minetors from Slovak University of Technology Bratislava won the competition, finishing just ahead of team POLice from Politecnico of Torino, and team KNE Fideltronic from AGH University of Science and Technology Krakow. The best 2 teams are invited to attend the Freescale Cup Worldwide Finals that will be held in Hanyang University, Seoul, Korea on August 29–30, 2014 to race their vehicle against finalists from other continents.

The team KNE Fideltronik from Poland got the Fraunhofer Special award "the most innovative car". © Fraunhofer IIS/ Peter Roggenthin | More pictures in color and print quality: www.iis.fraunhofer.de/en/pr.

"The Freescale Cup continues to attract a growing number of students and educators thanks to its fast pace and linkage to automotive and robotics applications" said Flavio Stiffan, responsible for the University Programs in EMEA. "I am confident that the learning achieved during the last 6 months will support those students in successfully develop their career in engineering. The industry values very much students that have "hands-on" experience in state of the art technologies, and that demonstrated ability to collaborate, innovate and challenge themselves".

Albert Heuberger, Leiter des Fraunhofer IIS: "Fraunhofer IIS hosted the international student competition "Freescale Cup" for the past two days. The fascination with technology, the commitment of all participants as well as fairplay were tangible all around. Our conclusion: technology unites. That is why we, as a global leader in applied research, were extremely pleased to host the Freescale Cup EMEA finals."

In addition to participating in the competition, students got the opportunity to share their work and network with their peers, faculty, and Freescale engineers, industry partners and customers.

Anatomy of an Intelligent Car

The teams of up to three students each received a standard Freescale Cup car kits in October and have been working with their school professors to create the fastest smart car in the EMEA region. The creation of this intelligent car requires:

- embedded software programming and basic circuit creation using Freescale parts included in the entry kit
- students to create motor control hardware and software to propel and steer their intelligent car
- students to interface with a camera to navigate the car through the race course by following the guideline

The standard intelligent car components are the model car kit, servo, electric motors, a battery with a charger and a quick start guide. Below is a list of the specific elements by function:

- Chassis – 1/18 Scale model
- Propulsion – 7.2V DC motors (one for each rear wheel)
- Steering - servo motor
- Control system – Freescale Qorivva MPC5606B automotive controller or ARM® Cortex®- M Kinetis MCU industrial controller
- Motor control – Freescale analog board featuring MC33931 H-Bridge
- Guidance – CMOS camera

143 teams from 51 universities in 15 countries enrolled into the 2013–2014 season's competition. ARM and Mathworks are the two global sponsors present at the event. Their engagement into the Freescale Cup provide hardware and software support to the students. Fraunhofer IIS is an EMEA partner has been the host for the 2014 EMEA Challenge.

Online resources

Online lectures focusing on the Freescale Cup smart car are posted on the Freescale Community University Site and on the Freescale training site to provide further information to the students, allowing them to find hints about how to optimize their projects.

The Freescale Community Forum include students from around the world, helping each other and, with the added support from Freescale employees, providing answers to some of the more complicated questions.

- EMEA Coordination: Flavio Stiffan flavio.stiffan@freescale.com

- Freescale Communities University Programs: https://community.freescale.com/community/uvp
- Freescale University Program: www.freescale.com/universityprograms
- Freescale Cup Knowledge Center: https://community.freescale.com/docs/DOC-1284

The EMEA Freescale Cup 2014–15 season

Enrollments for the 2014–15 season will start in May with information meetings at the interested schools. Contacts are available at http://www.freescale.com/freescalecup.

About Freescale

Freescale Semiconductor (NYSE:FSL) is a global leader in embedded processing solutions, providing industry leading products that are advancing the automotive, consumer, industrial and networking markets. From microprocessors and microcontrollers to sensors, analog integrated circuits and connectivity – our technologies are the foundation for the innovations that make our world greener, safer, healthier and more connected. Some of our key applications and end-markets include automotive safety, hybrid and all-electric vehicles, next generation wireless infrastructure, smart energy management, portable medical devices, consumer appliances and smart mobile devices. The company is based in Austin, Texas, and has design, research and development, manufacturing and sales operations around the world. www.freescale.com