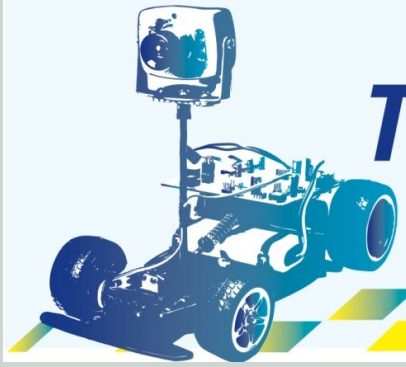

The Freescale Cup

Intelligent Car Racing

The Freescale Cup

EMEA Region

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The Freescale Cup

The Freescale Cup is your chance to learn about electrical (circuitry, interfacing and software design) and mechanical engineering (control theory) as well as sharpening your communication and team work skills. With a blend of high speed and high tech, Freescale supports the students of today to become the innovators of tomorrow.

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Objectives

- A collaborative, competitive, and hands-on way for students to learn about embedded systems and control
- Students get the opportunity to share their work and network with faculty, Freescale industry partners and customers, and Freescale engineers….and win an attractive prize!

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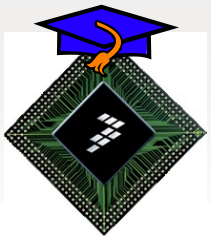

Event Overview

- Students teams build, program, and race a model car around a track for speed---fastest car to complete the track without going off, wins.
- Competitions can vary from individual schools to multiple country contests.
- The standard Intelligent Car components are the model car kit, servo, electric motors, battery and charger, and guides to get-up-and-going quickly. MCU and Sensor Package vary by region.

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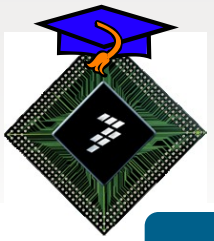

Competition Timeline Season 2011/12

School Enrollment: May 2011

Technology Trainings:
September/October 2011

Teams' racing car preparation
October 2011/December 2011

EMEA Finals: Q1 2012

Worldwide Finals: June 2012

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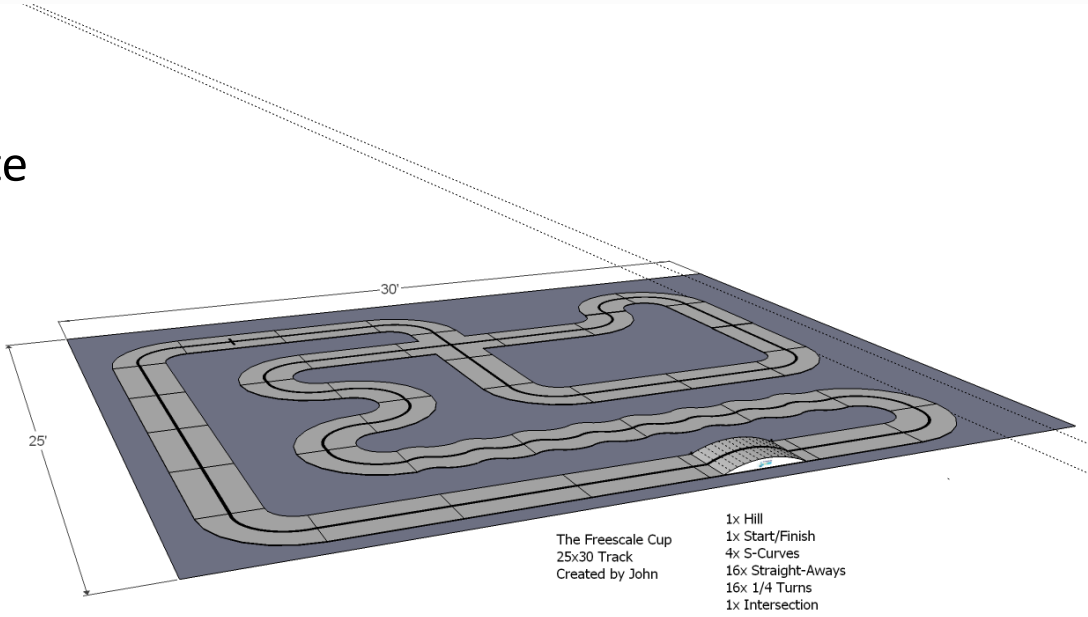
About the Track

- Black Line (3cm) on raised White Background (50cm)
- Each year the track design is changed to incorporate a different complexity. E.g. incorporate a hill followed by a sharp turn.
- Electronic Timing Gate



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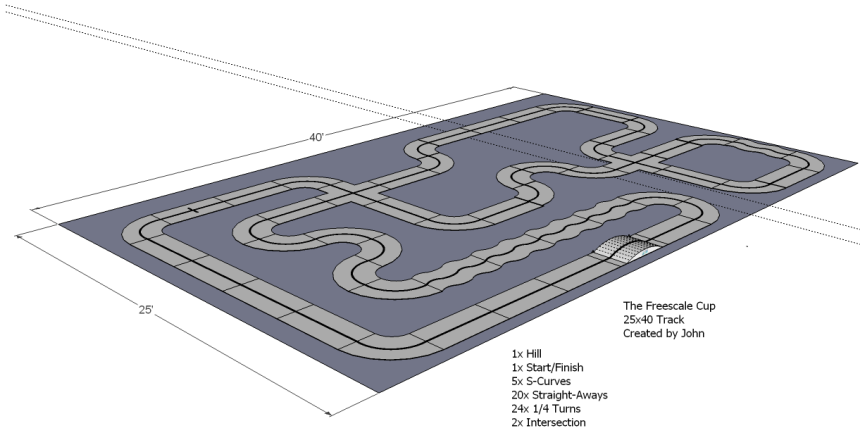
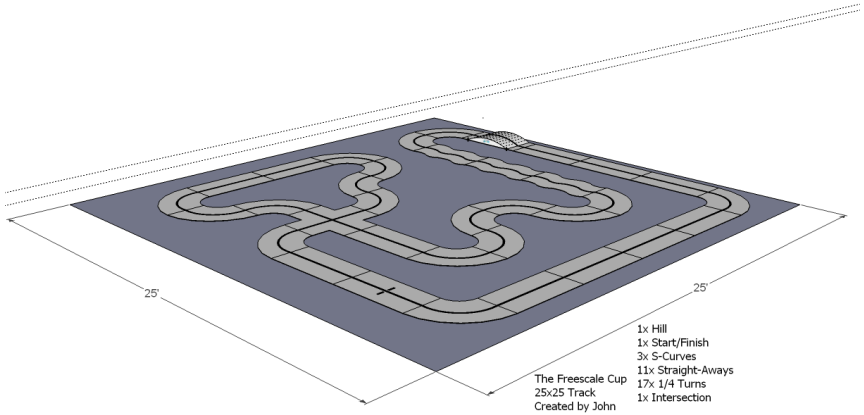
Other Examples of Race Tracks





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Intelligent Car Kit

Supplied by Freescale to each team

Includes:

- 1/18th Scale Model Car Chassis
- Drive Motor
- Steering Motor
- 7.2V Rechargeable Battery
- Control System (Freescale MCU 32 bit platform)

CMOS Camera sensor to be supplied by each participating team

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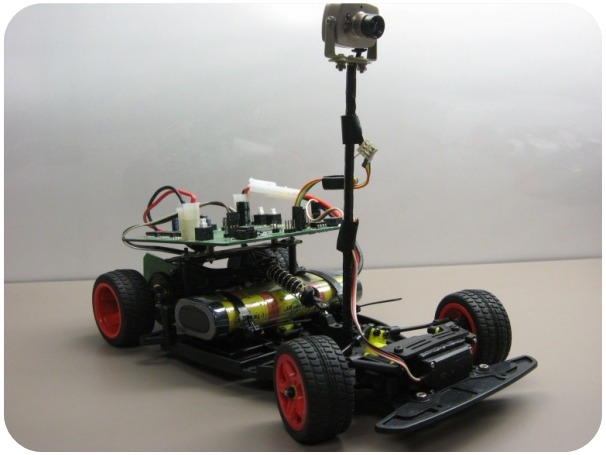
Freescale Provides…

- Intelligent Car Kit
- Training of Faculty
- Race Day Event Support – Org. Guide, People
- Online Community for students, faculty and industry to collaborate, FAQ's and training content.



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Featured Freescale Technology

- Qorivva Power Architecture MPC5604B
- Proven platform for the automotive and industrial markets
- Development using the TRK-MPC5604B (1 per vehicle)

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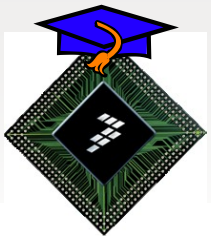

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- Freescale University Program: www.freescale.com/universityprograms

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