Chong Chee Kang

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June 4, 2012

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## **PMBLDC**

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■ Permanent Magnet Brushless DC motor



Figure: Source: http://dev.emcelettronica.com/

## Shell Eco-Marathon

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Race for mileage, not speed

- Category:
  - Urban Concept
  - Protoype
- plug-in electric
- 4 laps with 10 seconds stoppage between each lap

### **Problems**

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- Types of torque produced by PMBLDC
  - cogging torque
  - reluctance torque
  - mutual torque
- Torque ripple
- Poor Strategy

## **Objectives**

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- To identify the output signal of the controller circuit and the hall effect sensor of the PMBLDC and develop a set of instrument for measuring the mileage of the electric vehicle.
- 2 To study the track profile of Sepang North Track and create a simulation program for simulating the vehicle dynamics at the Sepang North Track.
- 3 To compose a set of strategy to increase the mileage of the electric vehicle running on the Sepang North Track based using the simulation program.

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