

Wireless Charging Platform for an Urban Vehicle

Status:	Filled
Group Members:	Team 1: Paul Singh, Perry Rakhra, Alireza Dibaienya, Daniel Ly-Ma Team 2: Arabi Elhouderi, Ganimed Nurgaliyev, Kuuku Acquaaah-Arhin, Michel Guerrero
Sponsor(s):	Moove Innovations
Supervisor(s):	Donald Wong, Moove Innovations Darius Saheb, Moove Innovations Rodney Vaughan, PhD, PEng, Professor, Engineering Science Jason Wang, PhD, Assistant Professor, Mechatronic Systems Engineering

Project Description

Background Information:

Moovee Innovations, Inc., Vancouver, BC is targeting the market in green urban mobility. The goal is to develop a state-of-the-art personal mobility vehicle for the aging population and beyond. Code named Project Insecta, the light-weight vehicle is designed to travel at urban speeds and to navigate the city intelligently and ecologically, while excelling at safety and eco-efficiency.

Project Main Objective(s):

The wireless charging system would allow the user to charge their electric vehicle without the hassle of plugging it in. The system consists of a wireless power transmitter module, which is installed on the parking area at ground level, and a wireless power receiver module located inside the vehicle. The vehicle parking position will be different every time, hence a misalignment between the transmitter and receiver module will exist. One of the challenges of the design is to guarantee power transfer efficiency.

Project Main Deliverable(s):

A proof of concept prototype system capable of wirelessly charging the vehicle within a reasonable charging time. The system should demonstrate good power transfer efficiency including a solution for misalignment-insensitivity that ensures good efficiency at all times. It is important that the power receiver module is compact and light-weight while the overall system is safe and low cost.

Industry Contact Information:

Proposed By: Donald Wong and Darius Saheb
Company Name: Moovee Innovations
Company Address: 618 East Kent Ave. South, Suite 103
Email Address: darius.s@mooveeinnovation.com
Company Phone: 6043222177
Company Website: www.mooveeinnovations.com
Date:03/09/2013

Special considerations (equipment, location, constraints, existing material...):

The students are welcome to consult with Moovee for guidance, and to work on-site as required. Students may propose financial support from Moovee for their project expenditures beyond University's coverage.