



COLLEGE OF ENGINEERING & TECHNOLOGY

Department: Electronics and Communications Engineering, Cairo

Graduation Project Description Form

Project Title: Design and implementation of Intelligent transportation system using wireless Sensor Network

Duration from mo/year ____ till mo/year ____

Project Supervisor(s): Dr KHALED HUSSEIN MOUSTAFA

Product Category

Algorithm ____ Hardware ____ Software ____

Standards:

Safety: UL, CE ____ IEEE ____ FCC ____ Other ____

Practical Realization Form

PCB ____ Firmware ____ Embedded CPU Kit (ARM, ..etc): ____

PC Software ____ Ready-made Package ____ DSP Kit ____ FPGA Kit ____

VLSI Schematics ____ VLSI Layout ____ VLSI Silicon (ASIC) ____

Language

VHDL/Verilog ____ Matlab ____ C/C++/Java ____

Productization

Finished Product Form: ____ Possible Commercialization ____

Amount of funds needed for buying components: ____

IEEE GOLD Made-In-Egypt/Engineering Day: ____

ITAC (ITIDA) or NTRA Funding Application: ____

Testing

Functional ____ Simulation ____ Parameters ____ Final Hardware ____ Other: ____

Lab Test Setup

EMC ____ Environmental ____ Microwave ____ Analog Lab ____ Other: ____

CAD Tools (No unauthentic software is allowed):

Elective Classes Required:



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Abstract

Design and implementation of intelligent transportation system for smart cities to monitor the transportation. We study the wireless sensor network and its applications such as smart cities and monitoring transportation. We choose tracking wireless sensors to be employed in the network. First, we develop WSN with base station and tracking sensors. Second, the targets are detected by the sensors and any target is reported with its location to the base station. Third, the network gives information to cars on the road to prevent accidents due to speed and this is our task to fully study intelligent transportation WSN for monitoring transportation.

Description of the Task:

- Simulation of target tracking WSN
- GUI for target tracking WSN on the computer
- Design and Implementation of Secure target tracking WSN for monitoring transportation

Experimental and Computer Work:

- Simulation of Secure target tracking WSN using MATLAB
- Programming the sensor mote
- Design and Implementation of target tracking WSN for monitoring transportation

Time Table:

No.	<i>Date</i>	Task	<i>Evaluation</i>	Notes
1	1/10/2013	Understanding the objectives of the project		
2	1/11/2013	Simulation of intelligent transportation using WSN		
3	1/12/2013	Implementation of intelligent transportation using WSN		
4	1/2/2014	Building the GUI of intelligent transportation WSN		



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5	1/5/2014	Implementation of intelligent transportation WSN		
6	1/6/2014	Submission of the project		

References and Links