



COLLEGE OF ENGINEERING & TECHNOLOGY

Department: Electronics and Communications Engineering, Cairo

Graduation Project Description Form

Project Supervisor(s): DR KHALED HUSSEIN MOUSTAFA

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

Duration from 9/2013 ___till 7/2014 _____

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)_____



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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*):



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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		



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References and Links