COLLEGE OF ENGINEERING & TECHNOLOGY

Department: Electronics and Communications Engineering, Cairo

Graduation Project Description Form

Project Supervisor(s): 1- Dr. Ezz Eldin Farouk Ali

2- Dr. Ashraf Mahran Mohamed

Project Title: Design and Implementation of Hand Held GPS Navigator

Duration from mo/year 10/2013 till mo/year 06/2014

Product Category

Algorithm___ Hardware Yes Software Yes

Standards:

Safety: UL, CE_____ IEEE Yes FCC

Other _____

Practical Realization Form

PCB Yes Firmware Yes 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 Yes C/C++/Java Yes

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Productization

Finished Product Form: Yes Possible Commercialization Yes

Amount of Funds Needed for buying components: 6000 Egyp. Pound

Testing

Functional_Yes Simulation Yes Parameters__ Final Hardware Yes

Lab Test Setup

EMC _____ Environmental_____ Microwave _____ Analog Lab_Yes

CAD Tools *(No unauthentic software is allowed):*

Elective Classes Required:

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Abstract

The Global Positioning System (GPS) is a U.S. space-based global navigation satellite system. It provides reliable positioning, navigation, and timing services to worldwide users on a continuous basis in all weather, day and night, anywhere on or near the Earth which has an unobstructed view of four or more GPS satellites. By implementing the Hand Held GPS Navigator, a lot of time and effort will be saved, it will be much easier to locate the position anywhere (streets, cars, homes, ….etc.) and even much more, it can provide us Itinerary of any place we want to go just by entering its coordinates of the destination and the device will guide us, graphically, to reach safely and fast.

References and Links

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[3] www.handheldgpsinformation.com/portable-gps-basics/what-is-gps.html

[4] www.gpsnavigatorssite.com/portable-gps-navigation-system-the-advantages.html

[5] www.gps-practice-and-fun.com/gps-tests.html

[6] www.safety-devices.com/how_compass_works.htm

[7] en.wikipedia.org/wiki/Compass

[8] en.wikipedia.org/wiki/Microcontroller

[9] en.wikipedia.org/wiki/PIC_microcontroller

[10] M. A.I. Qureshi, " PIC Microcontroller for absolute "Beginners"