



COLLEGE OF ENGINEERING & TECHNOLOGY

Department: Electronics and Communications Engineering, Cairo

Graduation Project Description Form

Project Title:

Adaptive Noise Canceler

Project Supervisor(s):

Dr. Safa Gasser (EC. Dept., College of Eng., AAST, Cairo)

Dr. Mohammad Mahallawi (EC. Dept., College of Eng., AAST, Cairo)

Duration from mo/year: 2/2013 till mo/year 2/2014

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) _____

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

Adaptive Noise Canceler

Dr. Safa Gasser / Dr. Mohammad Mahallawi

A common problem in signal processing and communication is to reduce unwanted noise. It arises in such a diverse problem as the suppression of a 60Hz interference in an electronic circuit and the suppression of a mother's heartbeat masking the fetal heartbeat in an EKG trace [Widrow and Stearns 1985]. A particularly effective means of accomplishing this is the adaptive noise canceler

In this project students are expected to learn the theory of different of adaptive filter algorithms . As well as, the students are expected to implement an adaptive noise canceler using Matlab simulation to suppress a 60 Hz interference

References and Links