

September 20, 2017

Project Proposal

Introduction

The final project in this class will be for the team of students to implement an embedded control system on a Xilinx SOC platform. This semester the students are given the choice to implement a control system that it is of interest to them and/or it will eventually help them in their graduate work.

Requirements for the project

- a) The system to be controlled consists of at most one state variable, i.e. the controller to be implemented in the embedded system will be able to control (and measure) one variable.
- b) The system can be modeled in MATLAB. This will hopefully give an idea to the designers to model what voltage ranges will be required, what type of controller is needed to stabilize the system (if the system is unstable in nature), before a controller is implemented.
- c) The timing of the measured and control signals are well within the capabilities of the MicroBlaze embedded system.

Deliverables

Write a 2-3 page proposal outlining as much as possible the project your team has in mind. Describe what parts and electronic components you need to use for your project. Preferably use components that you can get from the EE department. If you saw the control project you want to work on, include the reference to the journal, magazine, book in the reference section.