Course: EEE 206: Energy Conversion laboratory

Project Name: Speed Control of DC motor by FPGA

The DC motor is most important equipment in many industrial applications which requires efficient controllability over variable speed-load characteristics. High performance DC motors are extensively used in industrial applications. A field programmable Gate Array (FPGA) is a large Programmable logic device that can be used to implement combinational and sequential logic circuits. Thus, an FPGA can also be used to implement the control-logic design. Using a suitable HDL(Hardware Description Language) it is possible to program an FPGA to control the speed of DC motor. Using a closed loop logic involving feedback from an IR sensor, Pulse Width Modulation(PWM) Technique a motor can be run at the desired speed depending on the load.

We propose to create a smooth, efficient and responsive DC motor speed controller using a FPGA programmed using a suitable HDL.

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Section - C

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