Project Proposal

To: Dr. Huggins

From: R. M. Satterthwaite (rsattert@bradley.edu), R. Shockency (rshocken@bradley.edu)

CC: Dr. Anakwa

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Re: Project Proposal

Robotic Platform Design

This project will consist of the design, build, and test of a robotic platform for use in other projects and autonomous applications. The platform will have a track vehicle with variable speed control in four directions, and 360 degree turning. It will also have a camera, and 2-4 motor control controls to be used as needed. All information will be transmitted by wireless connection. The basic commands will be programmed in for use by the end user. This will be microprocessor or FPGA controlled on board.

There will be two motors driving this vehicle, one for each side controlled by variable PWM signals. This will allow precise turning (measured in degrees) and precise control of speed. The motors will be synchronized by the RPM data received from rotary decoders.

The wireless link will be an 8211b modem connection that will transmit video images from the car to the receiver and transmit the control commands to the car.

The platform will have multiple ports for expansion. There will be control for 2 to 4 more motors that may be added by the end user. There will also be a video camera that will send video signals via the wireless connection.