

Accessible Manufacturing Equipment Phase 2

Our design team is being sponsored by the MSU Resource center for Persons with Disabilities (RCPD). We have reengineered an accessible manufacturing device, originally created by another capstone design team in the Fall of 2008. This machine was designed to cut pleated ribbon to length, and to be operated by someone with cognitive and visual disabilities. The machine will be deployed at a company called Lettuce Duit located in Galien, MI, where the cut ribbons will be sold as prize ribbons.

Our team improved this machine by making it more robust, easier to maintain, and faster at cutting ribbons. We also added variable speed control, to allow the machine to run faster or slower as required. We eliminated previous motor overheating issues. We redesigned the interface and control systems to be compatible with LEGO MINDSTORMS NXT. This allows the machine to be reprogrammed by high school LEGO Robotics club students near where the machine will be deployed. We also added a variety of small improvements to reduce the time it takes to cut the ribbon as well as prevent the ribbon from catching on the machine.

Team 2 would like to thank Mr. Stephen Blosser for help with the mechanical parts of our design. We would also like to thank Dr. Fang Peng and Lettuce Duit, without whom this project would not have been possible.

<http://www.egr.msu.edu/classes/ece480/capstone/fall10/group02/>



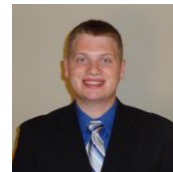
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Electrical Egr



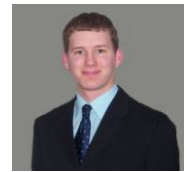
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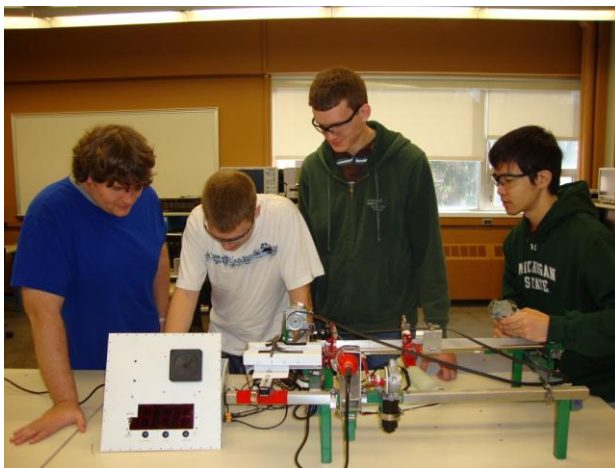
RCPD
*Maximizing
Ability & Opportunity*



Mr. Blosser



Dr. Peng



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