

## RESEARCH AND DEVELOPMENT OF FLEXIBLE CONTROL METHOD FOR MODULAR MACHINING TOOLS

Potential Sponsor: Horizon Group Inc., St. Louis, MO

### Project Scope:

The PI proposed modular machine tool design, or re-configurable machine tool design. One major component of such a machine tool is a flexible controller that can be easily re-programmed for the machining of different parts.

Currently available PC control may have real time application difficulty. PLC control requires well-trained design engineer and programmer. A better control method may be using a combination of software, hardware. The programming must be easy to learn, and the components must be re-useable.

The company has showed strong interests to support such research and development.



### Objectives:

- Study and establish the best methods to convert the waste material into power plant and household fuel.
- Study the economic feasibility of the above process.
- Test the strength and transportability of the fuel logs.
- Suggest to Monsanto any beneficial change of the current protein extraction process.

### Applications:

- The method developed can be used to compact animal feed, which has caught the attention of other branch of Monsanto, National Starch and Chemical Company, Williams Energy Company. Discussion of new project for manufacturing animal feed is under way.