THE MUSEUM OF SCIENCE AND INDUSTRY

THE FAB LAB

COMPUTER STATION AND CLASS-ROOM

LASER CUTTERS AND CNC

PROJECTS

Future Goals for the Fabrication Laboratory

- Help MSI with the PR of the FabLab
  Organize the web page
- Refine the settings of the laser cutter for different materials and more specific thicknesses
- Integrate the CNC Machine
- Put up instructions and brochures online and in physical form at the front desk, for those who wish to visit the lab.
- Organize time slots, and more clearly defined programs of education within the lab.
- Finalize all project ideas and develop a full tutorial library for the lab.

STUDENTS

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Acknowledgements

Museum of Science and Industry
Steven Willis
Veronica Robinson
Dr. David Gatchell, Dr. Kim Fluet, Mark Sheridan Academy, Robert Healy Elementary School, Prof. TJ McLeish , and Bret Balogh

IPRO 333

Fab Lab
Creating Design-to-Prototype Learning Modules at MSI

IN COLABORATION WITH THE FABRICATION LABORATORY AT THE MUSEUM OF SCIENCE AND INDUSTRY

FALL 2008

A goal of TEACHING diverse groups DIGITAL FABRICATION through MSI.

DESIGNING projects, and the refining the ORGANIZATION and methods currently used by the Lab.

Using the RESOURCES in The Fabrication Laboratory of the Museum of Science and Industry to their GREATEST POTENTIAL.

This being the first semester of the IPRO, we have dealt with the task of organizing and forming this project's goals. After researching fabrication laboratories, and looking over the lab at the Museum of Science and Industry (MSI) we came to the conclusion that we needed to both work on education programs and the organization and information in the lab itself. We divided the education programs in terms of the different users of the lab: *The science achievers, The museum members, Student groups, and Open access users.* In addition to this, we have evaluated the safety of the lab, and provided extra information for those currently running it. We broke up into two teams to address these goals.

SCIENCE ACHIEVERS

Science achievers are a group of highschool students enrolled in a 10 week program in the fablab at MSI. The projects for this group are specially designed to utilized several machines or processes, implementing a higher degree of education in the fields of science and digital fabrication technology. Project designs are a reflection of the interest of the group as derived from several surveys. These project tutorials include a personal generator and a TV transmitter, teaching the use of the laser cutters and electrical hand soldering.

top: TV transmitter
right: personal generator

OPEN ACCESS

The open access users are people who are interested in learning the equipment in the lab, but will not be doing any extensive projects using the lab.

wine rack and yoyo final products

There will be a series of organized time slots and short lessons where introductory project tutorials will be used. In contrast with the museum members they will not be expected to eventually work on long term projects involving more than one visit. We have designed a customizable laser cut wine rack tutorial for the open access group.

STUDENT GROUPS

Student Groups consist if grade school students visiting the fablab as part of an educational field trip Student groups are to participate as a class in the completion of one project, after which each student will possess their own personal finished product. These projects are based on school curriculums as determined by the education standards the Illinois education board. Research through surveys was executed in order to ascertain the project preference of both students and teachers.
One project tutorial, has been designed for this group, a rubber band train.

assembled train

fabricated kit of parts

MUSEUM MEMBERS

Museum members are those members who would be interested in using the lab for their own personal projects.

Because they are expected to eventually work on more complicated projects their introductory projects will be slightly more complicated than the open access users. We have designed tutorials for a 2D slide puzzle and a 3d puzzle box, both customizeable.

2D Puzzels