



MIDWEST
FABLAB
NETWORK

**FAB5: The Fifth International Fab Lab Forum
and Symposium on Digital Fabrication:**

Midwest Fab Lab Network Review (USA)

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Midwest Fab Lab Profile

www.mfln.org



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About Us

The Midwest Fab Lab Network was formed in December of 2006 at Neil Gershenfeld's suggestion. It is the first organization of its kind to promote digital fabrication laboratories in the region's educational institutions.

The purpose of the MFLN is to encourage and publicize Fab Labs for academic, business, and technological innovation. In the spirit of MIT's Center for Bits & Atoms and its Fab Lab models, the MFLN promotes no- or low-cost sharing of information, technology, collaborative projects, and applied research.

Membership is open to virtually anyone and any type of organization that subscribes to the principles of the Fab Charter and the MFLN charter. Members may include registered (full- and part-time) students, other individuals, businesses, academic and other public and private institutions, and such entities as the MFLN may determine by due process.

Fab Labs show strong promise for engaging students in Science, Technology, Engineering, and Mathematics (STEM) concepts and for developing 21st-century skills needed for the global economy. Therefore, the goal of the MFLN is to improve education in applied technology at the regional and national levels. It will address this goal by helping to integrate Fab Labs into P-20 educational curricula as a "value-added" enhancement of instruction, as a resource for local business, and as a testing ground for research-oriented projects to replicate and remodel Fab Lab learning.

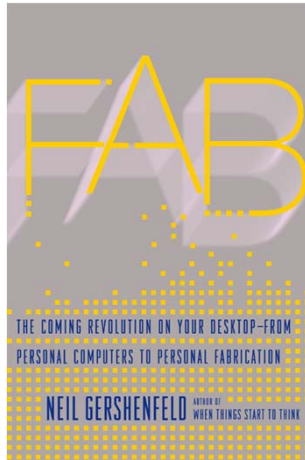


Midwest Fab Lab Profile

- **First Regional Network of Fab Labs**
- **Membership**
 - **24 Organizations and growing**
 - **Over 100 individual members**
 - **Industry partnerships (e.g. 3M, Motion Products, GE)**
 - **Open to ANY interested USA individuals or organizations**
- **Mission: Collaboration & Support**



MFLN Fab Lab Reintegration

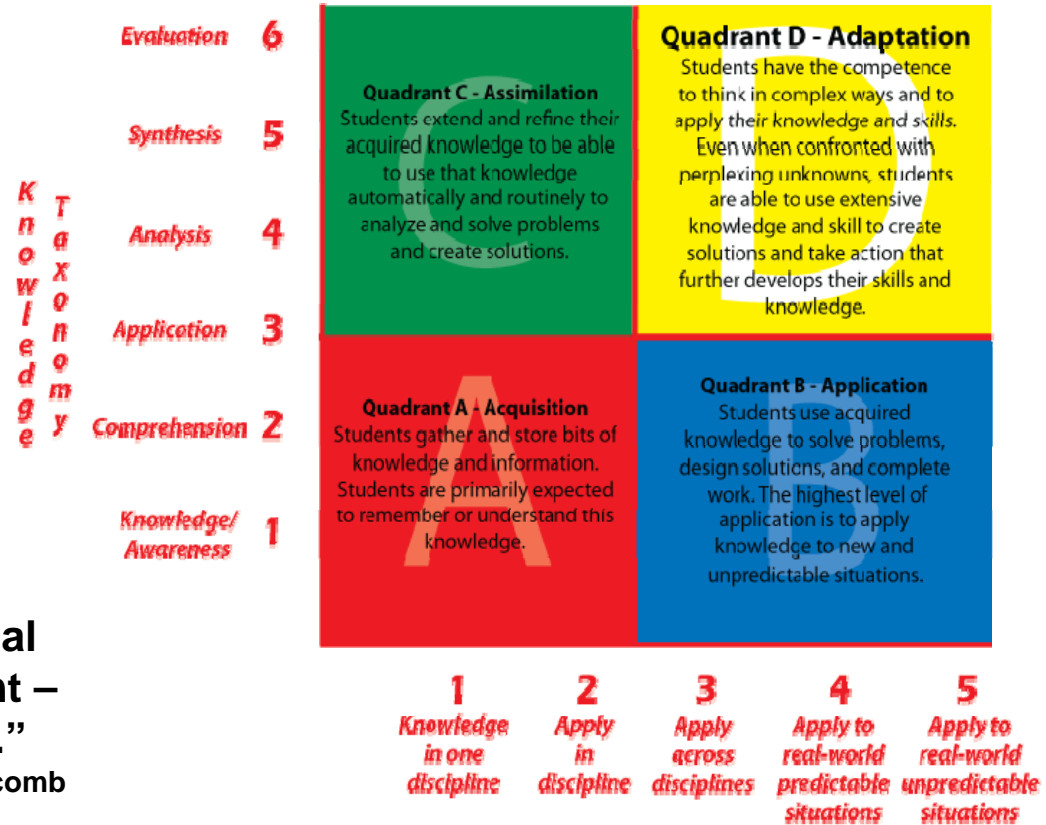


See pp. 31-42

“Community colleges are an essential part of our recovery in the present – and our prosperity in the future.”

President Barack Obama, on July 14, 2009 at Macomb CC, Warren, Michigan

Rigor-Relevance Model for Education



Application Model

International Center for Leadership in Education, www.LeaderEd.com



NSF Fab Lab Research Project

- **Midwest Digital Fabrication Partnership-NSF Grant Project #0802388**
 - **The MDFP will integrate MIT-based Digital Fabrication (Fab Lab) capabilities and resources into student learning experiences at undergraduate levels of higher education.**
- **Goals**
 1. **integrate Digital Fabrication Laboratories into selected Product Realization courses to provide enhanced, hands-on Science, Technology, Engineering and Mathematics (STEM) learning experiences**
 2. **assess the ability of Digital Fabrication Laboratory experiences to enhance students' STEM competencies and attitudes**
 3. **evaluate Digital Fabrication Laboratories as a STEM recruitment and retention vehicle.**



Midwest Digital Fabrication Partnership
NSF GRANT PROJECT #0802388

Fox Valley Technical College, University of Wisconsin-Stout,
Century College, and Lorain County Community College



NSF Fab Lab Research Projects

- **Special Workshop at the 2008 National Science Foundation Conference: “Leveraging Fab Labs in the ATE World”**
 - **Fab Labs create a highly-engaged learning environment that also significantly stimulates creativity and innovation. The MIT and MFLN fab lab teams reviewed the experiences, applicability and considerations of Fab Labs in education (secondary through graduate) with home schooled students demonstrating advanced Fab Lab capabilities.**
- **NSF VOSS Proposal: “Stakeholder Alignment of Virtual Organizations in Socio-Technical Systems”**
 - **The University of Illinois will analyze the alignment dynamics and tools associated with the Mid-West Fab Lab Network, which is a loosely connected set of “Fab Labs” located in a mix of community colleges, universities and communities all advancing community literacy in the principles of design and fabrication.**

➤ Highlights

- ✓ Based on proven technology implementation best practices and early fab lab experiences
- ✓ Structured and comprehensive approach for successful fab lab planning, implementation and mentoring throughout fab lab lifecycle
- ✓ Virtual workshop piloted with RapidTech (Saddleback CC) to support October Implementation
- ✓ Future MFLN offering

➤ Fab Lab Development Process (“Lifecycle”)

- ✓ Research
- ✓ Interest Generation
- ✓ Planning
- ✓ Justification
- ✓ Commitment
- ✓ Training
- ✓ Installation
- ✓ Implementation
- ✓ Enhancement
- ✓ Maintenance
- ✓ Sustainability



MFLN Fab Lab Symposium

➤ Highlights

- **November 4-6 at Fox Valley Technical College, Appleton, WI**
- **Meeting of presentations, demonstrations, and collaboration on in-depth fab lab topics**
- **Fab5 Sharing**
- **Executive Sponsor Forum**
- **Focus: Successful Fab Lab Development Process (“Lifecycle”)**



MFLN Resources & Contacts

➤ Resources:

- Website
- NEW: MFLN PORTAL

www.mfln.org

➤ Contacts:

- Jim Janisse
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A screenshot of the MFLN Library website interface. The page is titled "MFLN Library" and is part of the "Midwest FabLabs" initiative. The interface includes a navigation menu with options like "Daily News", "Admin/Services", "Instructional", "Resources", "Initiatives", and "Directory". The main content area displays a list of documents in the "MFLN Library" with columns for "Type" and "Name". The list includes items such as "MFLN Directory 8.12.2009", "MFLN Fab Lab Implementation Methodolgy[1]", and "Midwest Fab Lab Network (MFLN) By-Laws (Final)--12.08.06[1]". A sidebar on the left contains a list of categories including "Annual Planning Process", "AQIP Updates", "Blackboard Upgrade", "Federal Program Strategic Planning", and "Midwest FabLabs".

Fab Lab Reviews

