CarFab AutoLab 2.0

Distributed Vehicle Development and Fabrication

Robyn Allen - June 29th, 2006
Co-Director, MIT Vehicle Design Summit
MIT Vehicle Design Summit

- June 13th-August 13th
- 21 Teams, 13 Countries
- 5 vehicles done by August

→ ingredients for INNOVATION
Vehicle Design Specification

- 300+ mpg energy equivalence
- 2 passengers
- 150 mile driving range
- Storage for two bags
- Biofuel, Human-Power, Solar, Fuel-Cell

 ⇒ new transportation PARADIGM
CAD Design

Easily exchanged open source design between FabLabs
Space Frame / Monocoque

- Braze or weld steel components
- Structural Composite Shell (like an egg)
Aerodynamic Shell

- Cut cross sections (router)
- Layer with foam
- Sand → positive plug
- Form shell
  (fiber weave, epoxy)
Propulsion: Modular Design

- Human Powered Base
- Solar for Vehicle Based Grid
- Batteries to extend driving range
- Biofuels to support polyculture
Polyculture

- Revive Ecology, Community
- Plant like prairie, jungle
- Polyculture agriculture
  - Food
  - Biological Waste Treatment
  - Energy as biodiesel
  - Natural resources for building

→ Rural Symbiosis / Self-Sufficiency