Open Hardware: Current Legal Debates

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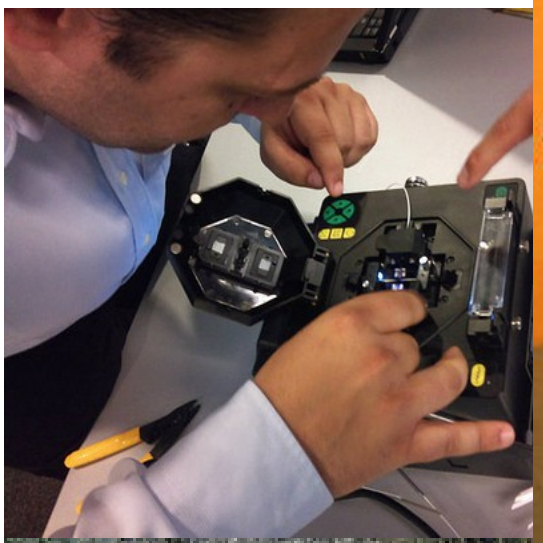
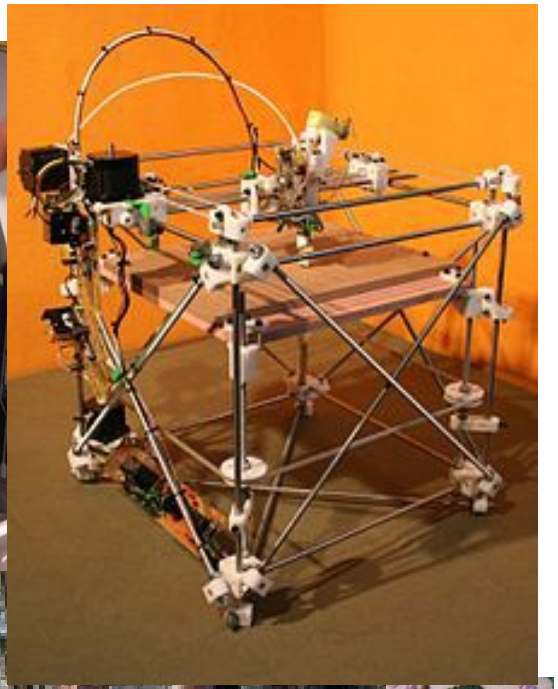
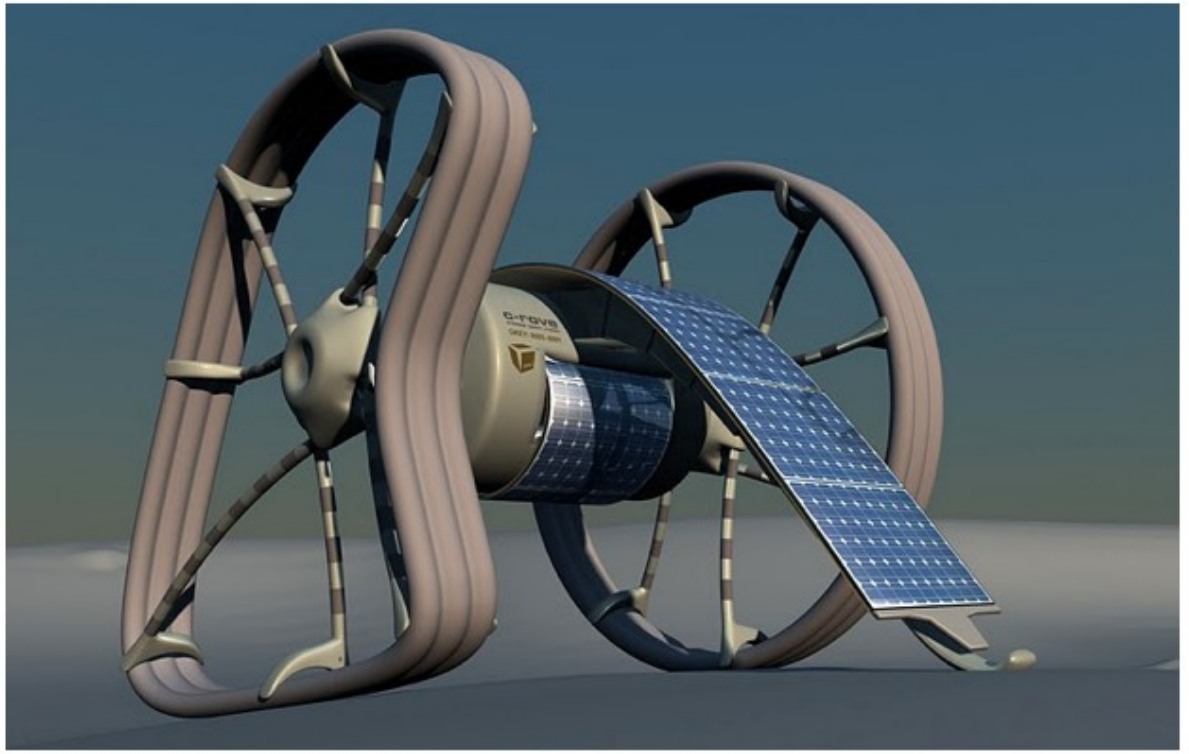
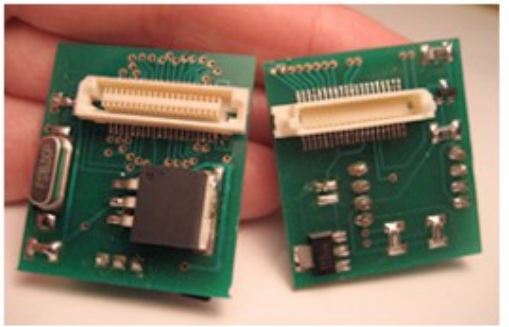
Kinds of open hardware

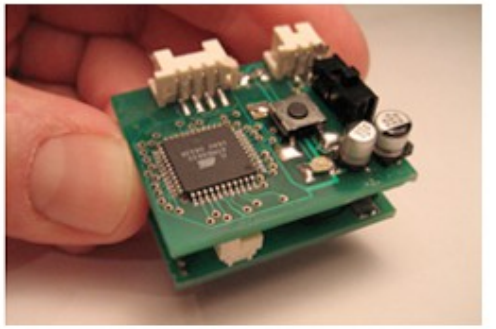




Electronics, Manufacturing, DIY, Crafts, OH4D



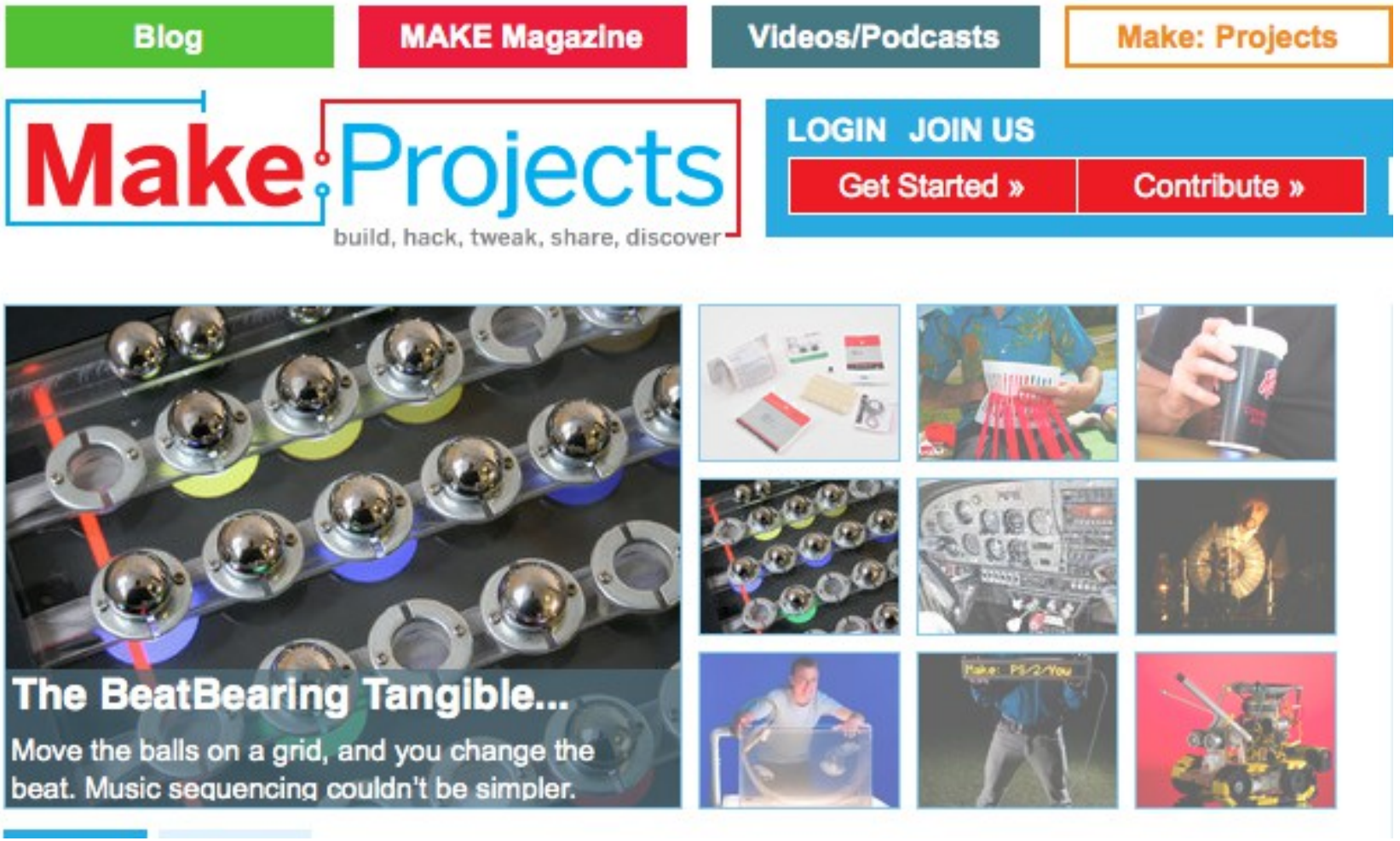




“Open Source” meets the physical world

Hardware hacking: does intellectual property matter?

Open Hardware for Development: maintaing a knowledge commons



The long tail: licensing for iteration, sustainability and profit

USA: SparkFun, Maker Store, Adafruit Industries, Little Bird Electronics, Modern Device, FunGizmos, NKC Electronics, Gravitech, RobotShop, Liquidware, Hacktronics, MakerBot Industries, Microcontroller Pros, Curious Inventor, AeroQuad, CuteDigi, EIO, Teach me to make, UltiMachine, Electrojoystick.com, Electronics is Fun, AME - After Midnight Engineering, Trossen Robotics, Jameco, Zagros Robotics, Advanced Micro Circuits Corp, iHeartEngineering

Open Hardware Licenses, Standards, Governance

open source hardware

OHANDA is an initiative to foster sustainable sharing of open hardware and design. It was first drafted at the GOSH!-Grounding Open Source Hardware summit at the Banff Centre in July 2009 and one of the first goals of the project is to build a service for sharing open hardware designs which includes a certification model and a registration. OHANDA is in process. The process is open.

APACHE

Open Source Hardware Definition

- 1. Documentation (The hardware must be released with documentation including design files, and must allow modification and distribution of the design files)
- 2. Scope (must specify the portion of the design)
- 3. Necessary Software (must be feasible to write open source software)
- 4. Derived Works (allows modifications and derived works, and shall allow them to be distributed under the same terms as the license of the original work.)
- 5. Free redistribution (no requirements for royalties of sale or free distribution of documentation)
- 6. Attribution (designers may be identified)
- 7. No Discrimination Against Persons or Groups
- 8. No Discrimination Against Fields of Endeavor
- 9. Distribution of License (rights apply to all)
- 10. License Must Not Be Specific to a Product
- 11. License Must Not Restrict Other Hardware or Software
- 12. License Must Be Technology-Neutral (excerpted from: http://freedomdefined.org/OSHW)

Some Types of Open Hardware Licenses/Standards/etc

- Fully copyleft (OHANDA)
  - 'turtles all the way down' – a boundary problem
- Copyleft on documentation (CERN, TAPR)
  - Is this too easy to circumvent?
- Non-OSHW conforming (Chumby HDK, Balloon License, etc)
  - Middle ground that attempts to prevent manufacturers from 'harrassment'. More necessary in US than in UK due to patent law?
- Non-copyleft (Apache derived)
  - Problem of free riders?

Recent debates

- Introducing a Unique Design Identifier (UDI) in v 1.2 of CERN OHL
  - This creates a requirement to link the object to the design specifications, found somewhere publicly accessible – no specification of where this should be: anywhere on the web
  - Javier from CERN notes that there are 2 types of OHL developers:
    - 1. folks that 'play along' and publish designs in good faith
    - Folks that follow the letter of the license, but not the spirit

What is a licence?

PERMISSION

to do something which would otherwise be

ILLEGAL

Hardware Copyleft?

Another problem with copyleft licences:

THERE CAN BE ONLY ONE*

*(ish)

Now where?

Where should OHANDA and other projects go?

- Success in introducing ideas such as UDI
- Appeals primarily to 'makers' from OSS software culture
- How can the expansion of open making/DIY be addressed by new legal campaigns?