

A Product is Never Finished

Looking at the Future of Design
From a Software Lens

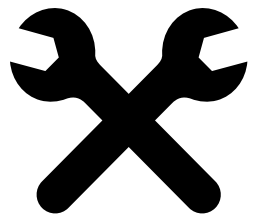


Dave Vondle



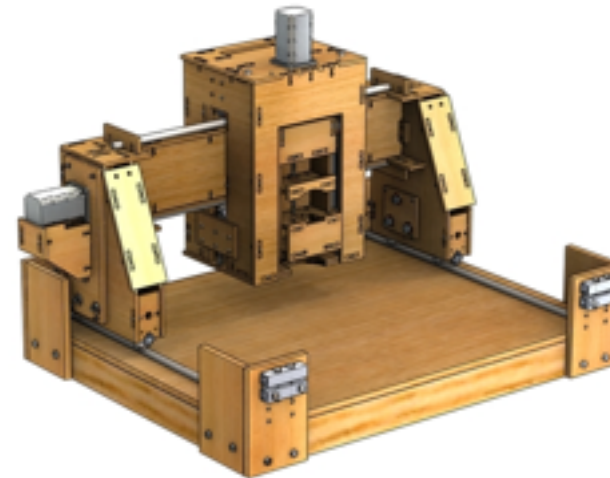
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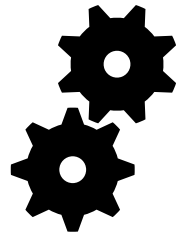
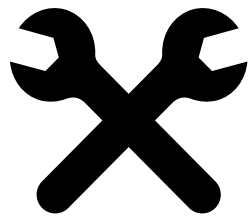
CHANGE IS HAPPENING IN THE DESIGN AND DEVELOPMENT OF PHYSICAL OBJECTS



01

New **tools** are enabling designers to go from concept to production cheaply and easily.





02

New **services** are allowing anyone to get involved.

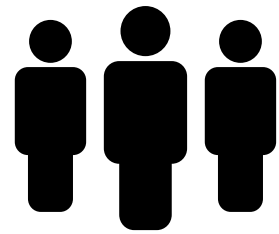
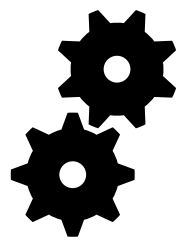
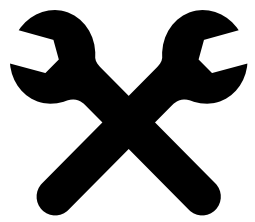
Ponoko[®]
the world's easiest making system

quirky

shapeways

protomold[®]

KICKSTARTER



03

Communities are promoting sharing and enabling products to get off of the ground with little upfront investment.

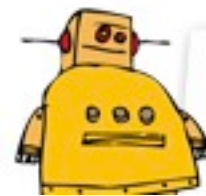


quirky

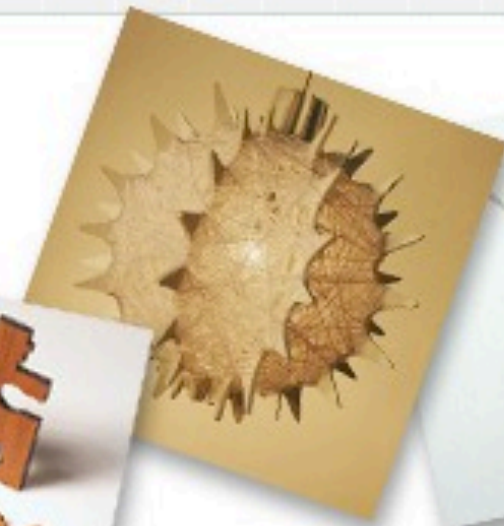
shapeways

KICKSTARTER

Thingiverse



instructables



the ponoko showroom

- * See what others have made >
- * Add your designs >

Ponoko®
the world's easiest making system

[home](#) | [materials](#) | [make](#) | [request](#) | [sell](#) | [showroom](#) | [blog](#)



make it yourself

Design a product, get an instant online price, then click to get it made right here.

Find out [how it works](#)

Get making



find someone to make it for you

Got a great idea but need help making it? Commission someone from our creative community to make it for you.

Find out [how it works](#)

Make a request

Bid on requests





Calling all creators of 'making apps'

Find out everything you need to know about developing applications for Personal Factory. [Learn more »](#)



Suggest apps & vote for your favorites

[Click here »](#)

What's this?

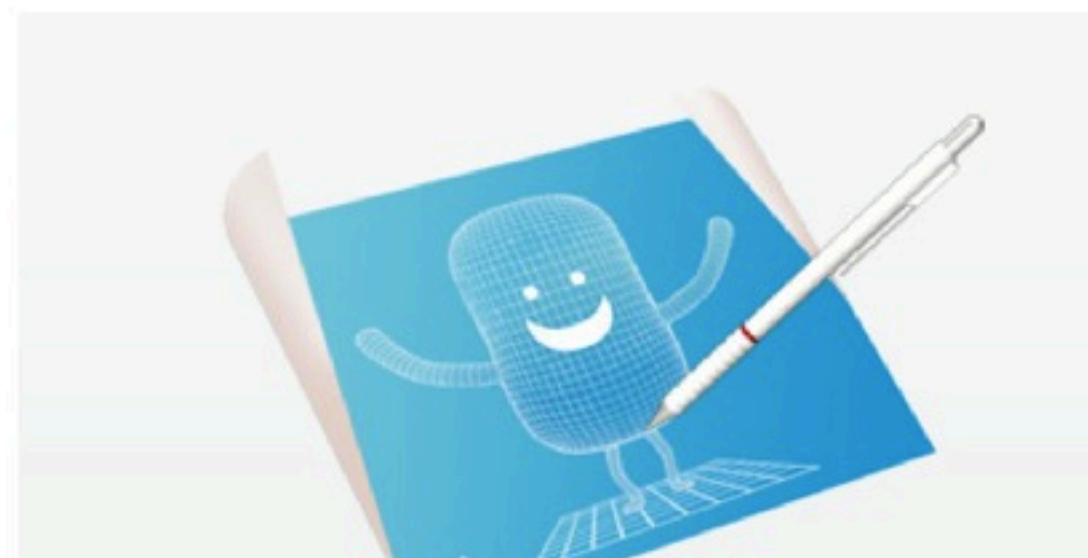
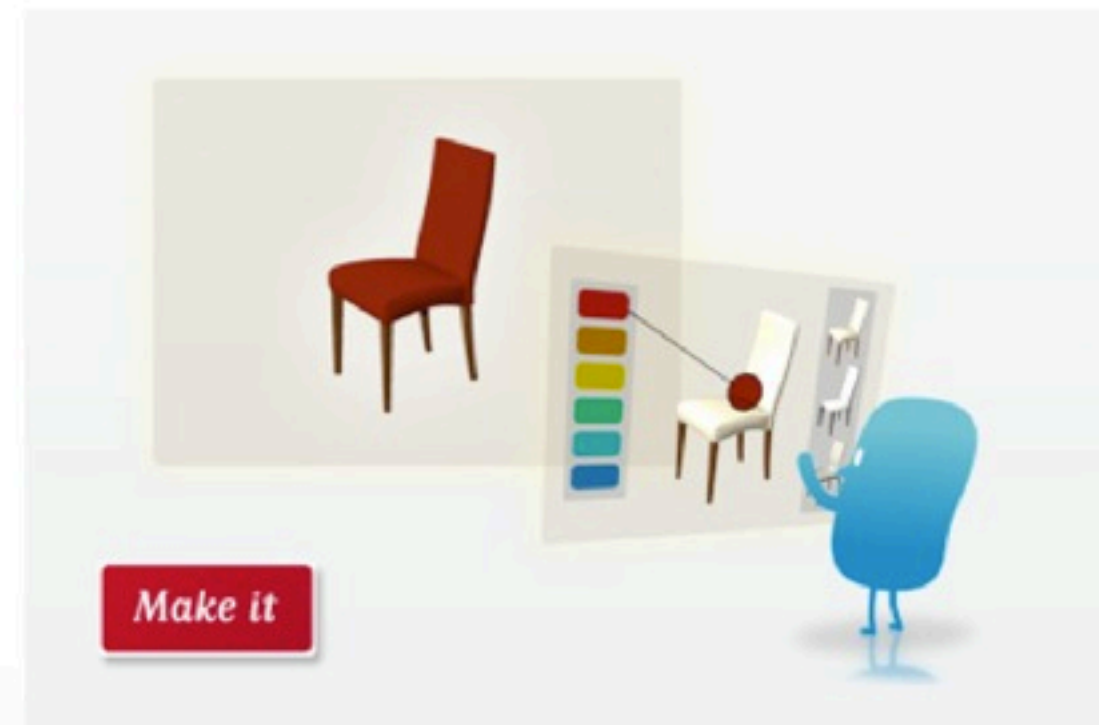
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Make custom goods – no design skills required!

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Custom goods for designers

We'll also have 'making apps' for designers to define the DNA of products – for yourself or for others to customize.

Just select the 'making app' that best suits the project you have in mind, design your product from scratch or individualize an existing downloadable design, then click the 'make it' button right within the design app.

You'll get an instant in-app price to make your design from the materials of your choice. It couldn't be easier.


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Product categories

[Download](#)
[Art](#)
[Gadgets](#)
[Games](#)
[Home decor](#)
[Jewelry](#)
[Hobby](#)
[Seasonal](#)

What's new?

- ▶ Shapeways is at DDW
- ▶ Ceramics is back
- ▶ Update on Shapeways Pricing
- ▶ Polished WS&F
- ▶ 3D printing in Silver
- ▶ Our Own 3D Printing Production

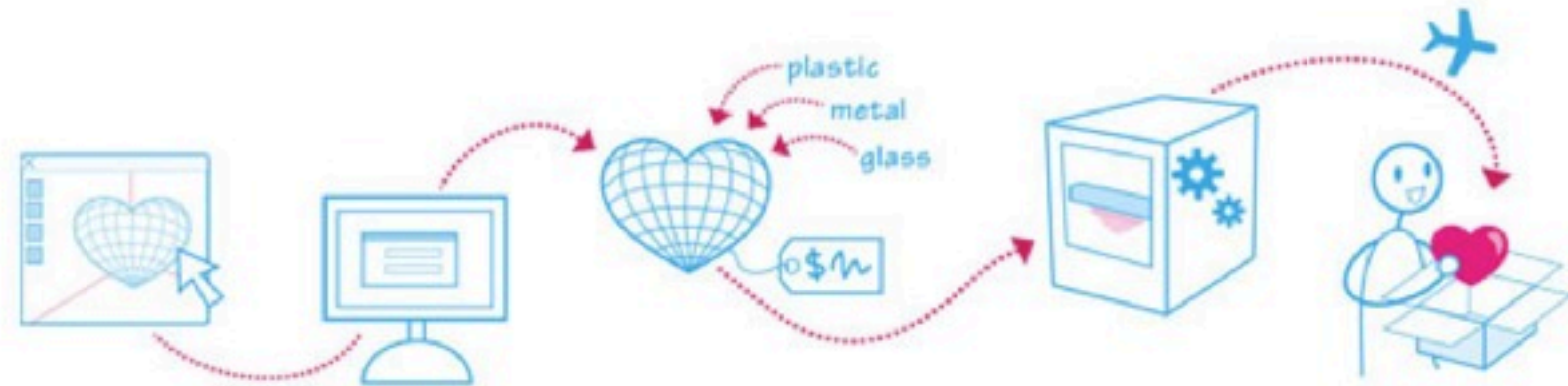
Shapeways in the press



The New York Times

WIRED

Personalized products FOR you and BY you



Buy, Make & Sell Your Products

With Shapeways 3D Printing

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The latest and coolest products

[view all products](#)


Lens Cap ...omizable)
\$ 20.50 | (€ 14.64)



iPad 2 Wrap: Cubed
\$ 23.51 | (€ 16.79)
jeff



SPARKLING collier2
\$ 58.80 | (€ 42.00)
Dario Scapitta Design



CableGuy ...earphones
\$ 14.00 | (€ 10.00)
Michiel Cornelissen

Shop for

Bed & Bath

Organization

Electronics & Accessories

Kids

Kitchen

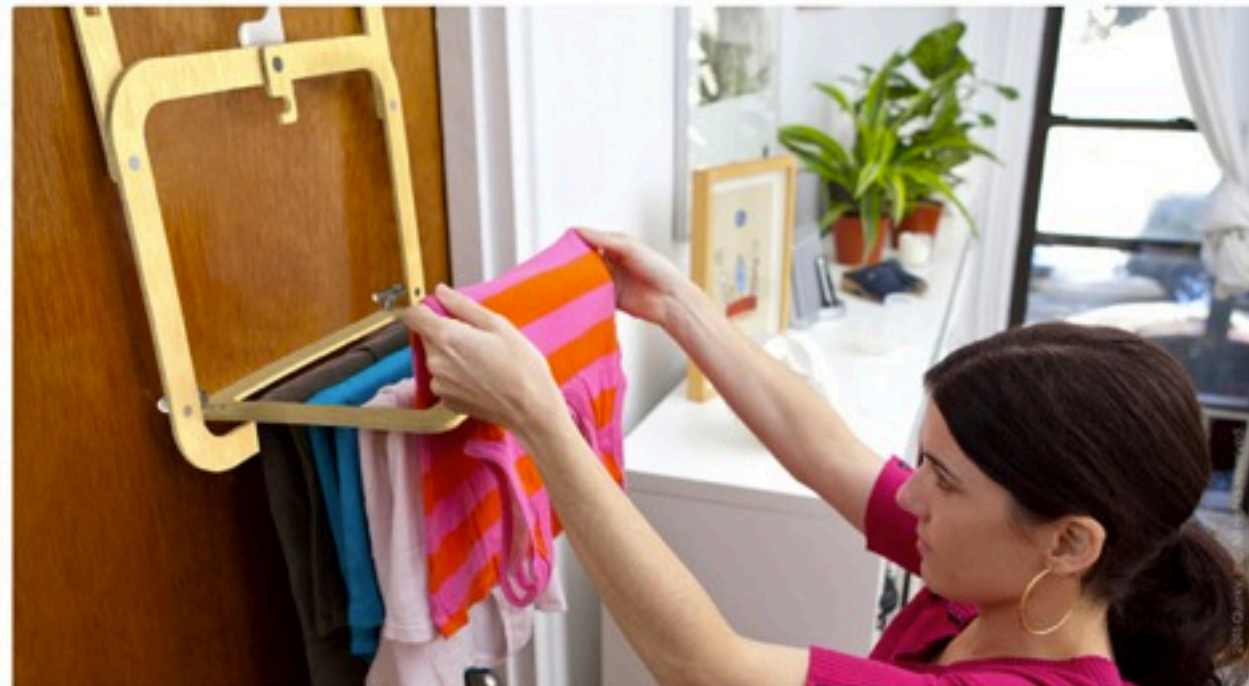
Housewares

Pets

Sports/Outdoors

Travel

Other



Slimline

Hang, Fold, Dry

\$19.99

msrp \$24.99

Buy Now

Questions?

Call us! Mon-Fri 8am-9pm EST

1-866-5QUIRKY

All (143)

Filter by:

All

Sort by:

Most Popular

Viewing: 1-9 of 143 [Show All](#)

1 2 3 ... 16 →

The Quirky Product States



Presale

We're still collecting pre-order commitments on this product. Once we hit this product's presale threshold, we'll move it into production. By getting in early, you'll get a price break AND earn influence. Plus, we won't charge your credit until the product is real and ready to ship. [More on](#)



Fender

iPad 2 Bumper

\$20.00

© 2011 Quirky, Inc. All rights reserved.



Ray

Recharge Naturally

\$39.99

msrp \$49.99

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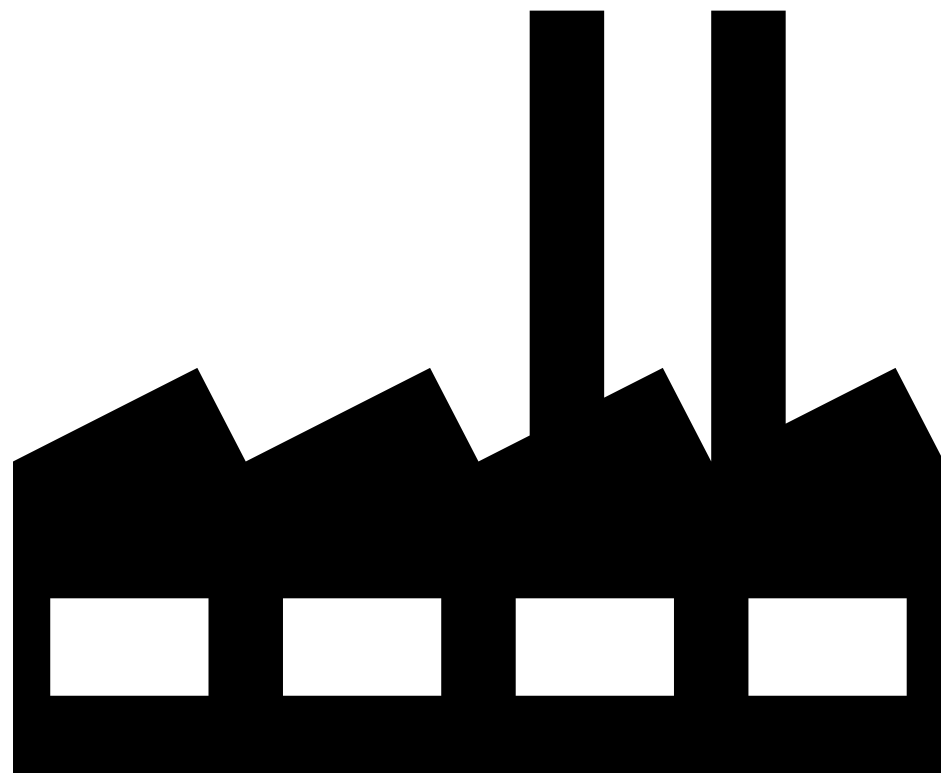


Bandits

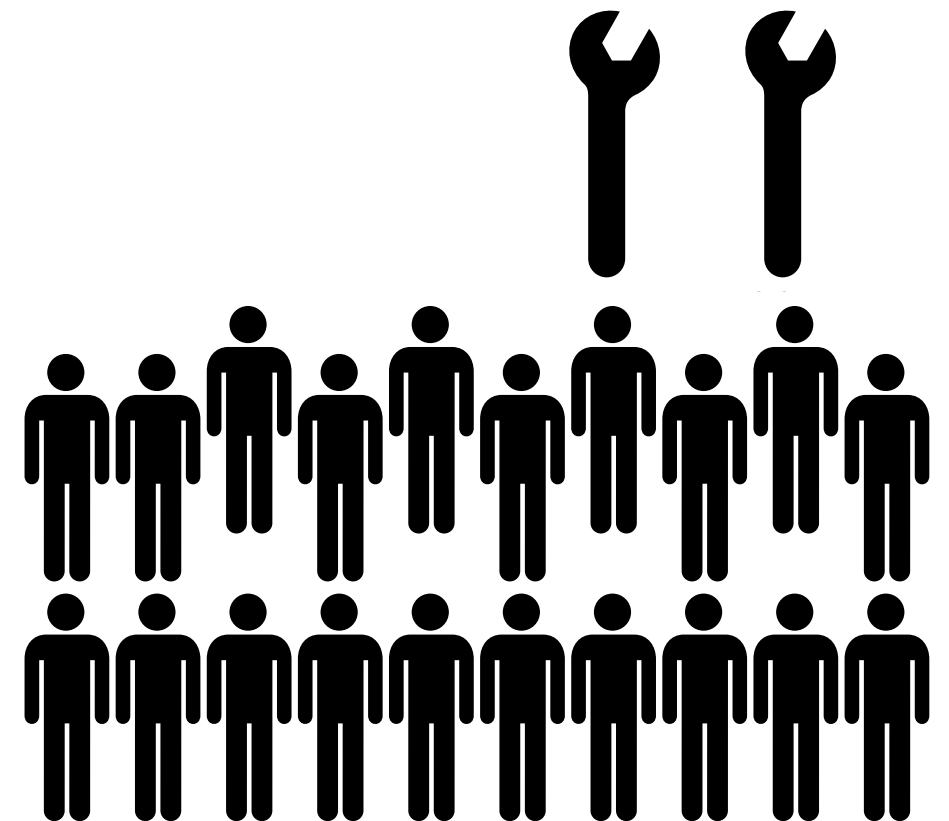
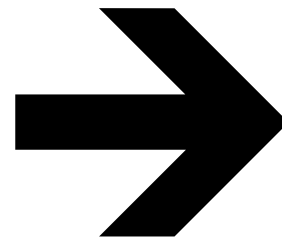
A Rubber Band + A Hook

\$9.99

SCALE HAS A DIFFERENT MEANING, BUT ACHIEVES SIMILAR RESULTS



INDUSTRY



COMMUNITY

THESE IDEAS ARE NOT NECESSARILY NEW

Read-Write Material Culture

Mike Kuniavsky
Sketching in Hardware
July 17, 2009

THE
GENTLEMAN and CABINET-MAKER'S
DIRECTOR:
Being a large COLLECTION of the
Most ELEGANT and USEFUL DESIGNS
OF
HOUSEHOLD FURNITURE,
In the Most FASHIONABLE TASTE.

Including a great VARIETY of

CHAIRS, SOPAS, BEDS, and COUCHES; CHINA-TABLES, DRESSING-TABLES, SHAVING-TABLES, BASIN-STANDS, and TEAKETTLE-STANDS; FRAMES for MARBLE-SLABS, BUREAU-DRESSING-TABLES, and COMMODES; WRITING-TABLES, and LIBRARY-TABLES; LIBRARY-BOOK-CASES, ORGAN-CASES for private Rooms, or Churches, DESKS, and BOOK-CASES; DRESSING and WRITING-TABLES with BOOK-CASES, TOILETS, CABINETS, and CLOATHS-PRESSES; CHINA-

CASES, CHINA-SHELVES, and BOOK-SHELVES; CANDLE-STANDS, TERMS for BUSTS, STANDS for CHINA JARS, and PEDESTALS; CISTERNS for WATER, LANTHORNS, and CHANDELIERS; FIRE-SCREENS, BRACKETS, and CLOCK-CASES; PIER-GLASSES, and TABLE-FRAMES; GIRANDOLES, CHIMNEY-PIECES, and PICTURE-FRAMES; STOVE-GRATES, BOARDERS, FETS, CHINESE-RAILING, and BRASS-WORK, for Furniture.

AND OTHER
ORNAMENTS.

TO WHICH IS PREFIXED,

A Short EXPLANATION of the Five ORDERS of ARCHITECTURE;

WITH

Proper DIRECTIONS for executing the most difficult Pieces, the Mouldings being exhibited at large, and the Dimensions of each DESIGN specified.

The Whole comprehended in TWO HUNDRED COPPER-PLATES, neatly engraved.

Calculated to improve and refine the present TASTE, and suited to the Fancy and Circumstances of Persons in all Degrees of Life.

By THOMAS CHIPPENDALE,
CABINET-MAKER and UPHOLSTERER, in St. Martin's Lane, London.


THE THIRD EDITION.

L O N D O N :

Printed for the AUTHOR, and sold at his House, in St. Martin's Lane;
Also by T. BECKET and P. A. DE HOWD, in the Strand.

MDCCCLXII.

Fac-Simile of the Title Page of Chippendale's "Director."



It's already happened to similar creative industries -
Music, Graphic Design, Film

WHAT COULD THIS DISRUPTION MEAN?



Objects are becoming physical
manifestations of their digital descriptors.



ONE COFFEE CUP A DAY | 30 DAYS 30 CUPS

One Cup a Day project is an experiment on creativity and rapid manufacturing, by ideating, designing, modeling and making available for production and purchase a coffee cup within 24 hours, everyday during one month.



By the end of each day, a new espresso coffee cup was made be available [for sale here](#).
The cups are printed in Glazed Ceramics by Shapeways.



Design one yourself

This project is open for collaboration,
Here I make available the [source files \(as .3dm & .3ds files\)](#) of a template basic cup,
please, feel free to play around and modify it.
Share your Designs and I'll post them at the [Contributions Gallery](#).

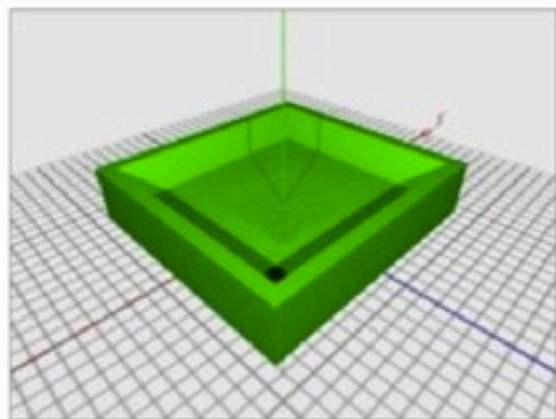
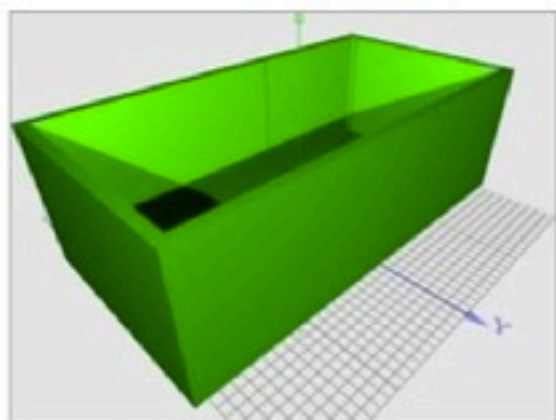
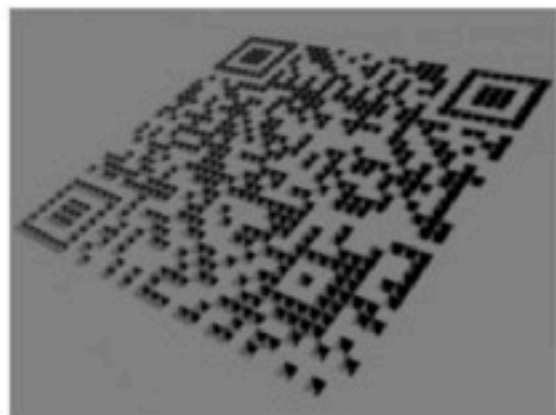
3D Print it yourself

The [OctoCup](#) is shared at [Thingiverse](#), feel free to grab the files, experiment with it and share the results.
I [printed one with a RepRap](#) and it looks awesome.





Parametric box with QR code for link by [I0b0](#)



Description

Print a box to hold a given number of items of a specified size.

Git repository: github.com/I0b0/parametric-box

Version 2 contains the QR code embedded in the back plate. This is a demo of github.com/I0b0/qr2scad, which was slapped together today to enable this sort of thing dynamically.

If someone sees the QR code on your thing in real life, they can find the design and make their own copies with just a photo of it. Theoretically, you could even assign this job to a machine, looking around the web (or your tool box) for things that can be duplicated.

Another possibility would be to encode the .scad file in a QR code (after using github.com/I0b0/OpenSCAD-Minimizer) and include that on the model. Nicely Von Neumann-friendly :)

Instructions

- Open in OpenSCAD.
- Uncomment one of the *Size configuration* sections. Dimensions for CD and DVD covers are provided.
- Set the *items* variable to the desired amount.
- Set *wall_thickness* if you want to.
- Check the size of the resulting model before printing!

Required Tools



[3D Printer](#)

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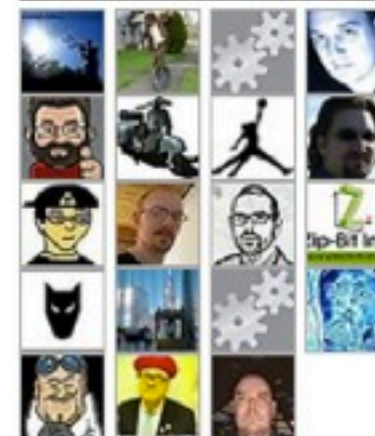
Creator



[I0b0](#)


1 year ago
on Oct 15, 2010

Likes



Tags

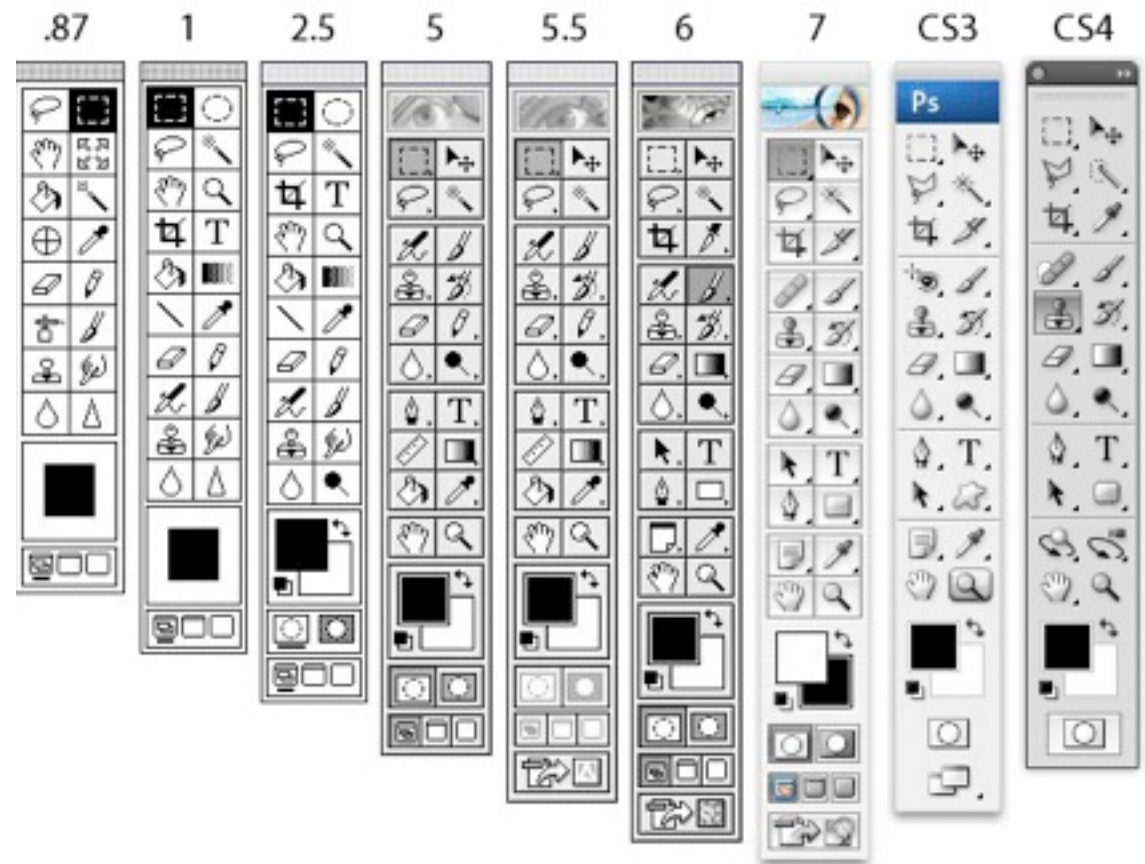
[3D \(2902\)](#)
[box \(220\)](#)
[container \(219\)](#)
[extruder \(427\)](#)



Let's look at software for some hints on
where things could go.

SOFTWARE IS NEVER FINISHED

Only at a particular version

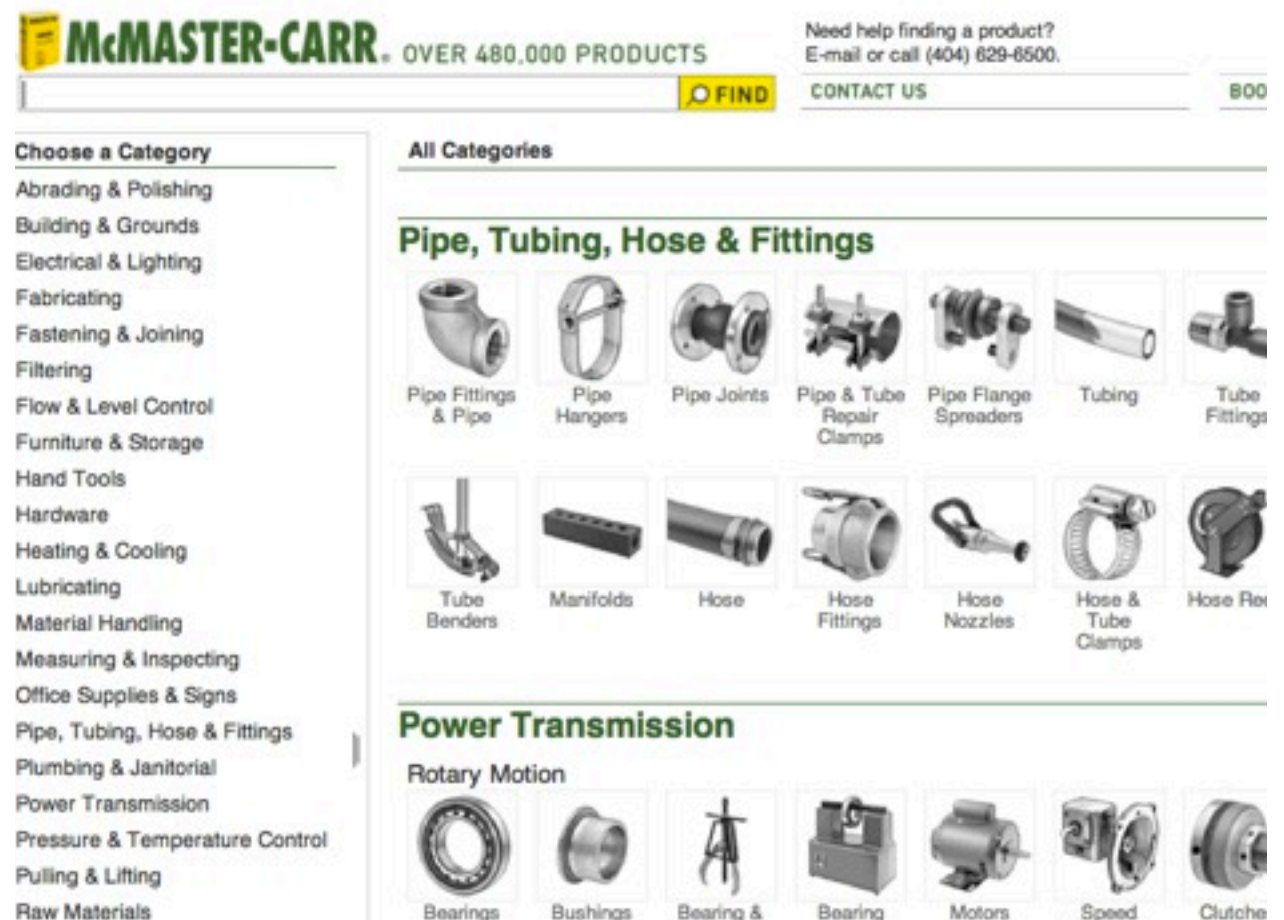


“OPEN” ANALOGOUS EXAMPLES ARE WIDELY AVAILABLE

Learning and innovation is enabled by the ease in which one can follow and build on analogous examples.

SOFTWARE IS BUILT USING ENCAPSULATION AND MODULARITY

Solid building blocks can be used where the designer need only know the inputs and outputs.



AGILE DEVELOPMENT, MINIMUM VIABLE PRODUCT LEAN STARTUP

Using the new landscape of tools, communities and services enables a product development process to be more like an agile software development process.



REACTIVE WEB DESIGN, A/B TESTING

As Mike said, we can look at manufacturing as reactive and scalable like a reactive web site.

A/B testing can be employed by tightening feedback loops.

OPEN SOFTWARE

Software is never finished, so if you want it to:

- Live on, inspire and teach others
- Benefit from outside contributions

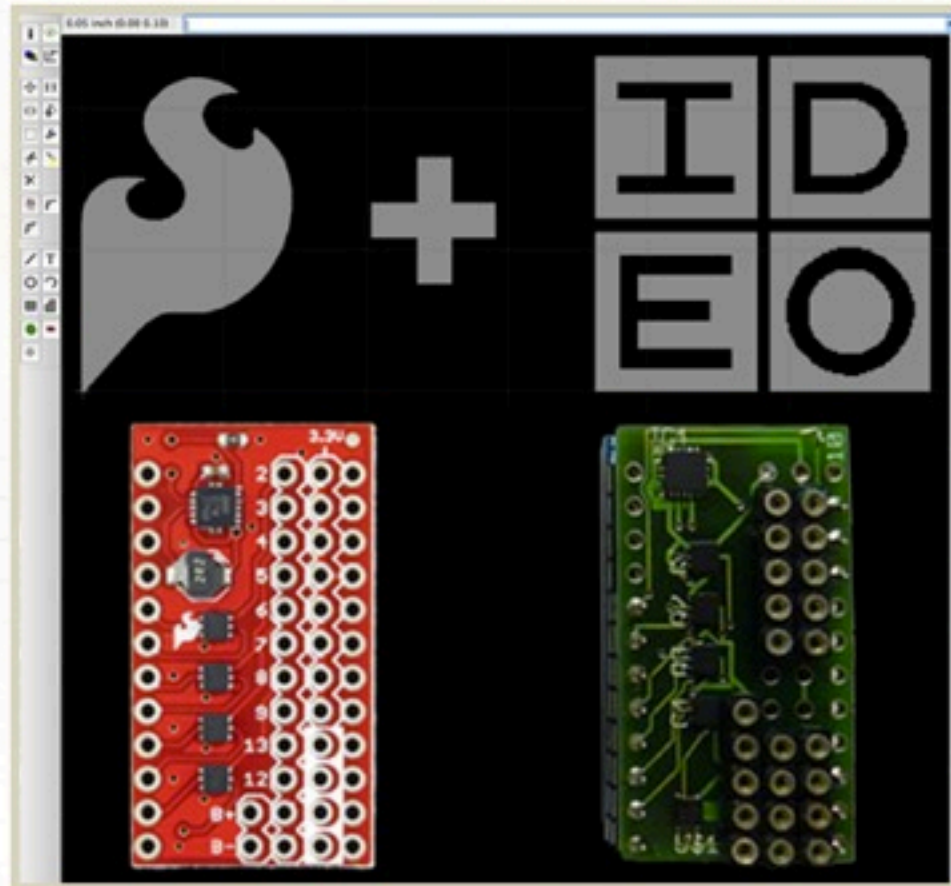
Opening it up can be the best way.



08
APR '11

OUR ARDUINO MINI SHIELD ON SPARKFUN!

ARDUINO, OPEN SOURCE, PROTOTYPING
BY DAVE VONDELE



After requests for the Arduino Mini Shield to be made available for purchase, I spoke with SparkFun to see if they could produce and sell the board. This way people won't have to go through the hassle of making a board run and populating them themselves.

Today I was pleasantly surprised to see the ["Mini FET Board"](#) on the SparkFun new product page!

The new board is almost identical. It's missing the battery charger and the jumper that allows you to reroute a button to pin 2 for wakeup from sleep. However, it's easy to get and only \$20.

We love seeing when our work gets used or repurposed. It's part of the reason we started IDEO Labs. If there are any other projects out there please let us know in the comments!

Buy it [here](#)

The original post along with source files can be found [here](#).

ABOUT IDEO LABS

IDEO Labs is a place where we can show bits of what we're working on, talk about prototyping, and share our excitement over the tools that help us create.

[MORE](#)



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ARCHIVES

September 2011

July 2011

April 2011

January 2011

Meta-Design - Design the platform in which directs, inspires and enables others to participate.





Calling all creators of 'making apps'

Find out everything you need to know about developing applications for Personal Factory. [Learn more »](#)



Suggest apps & vote for your favorites

[Click here »](#)

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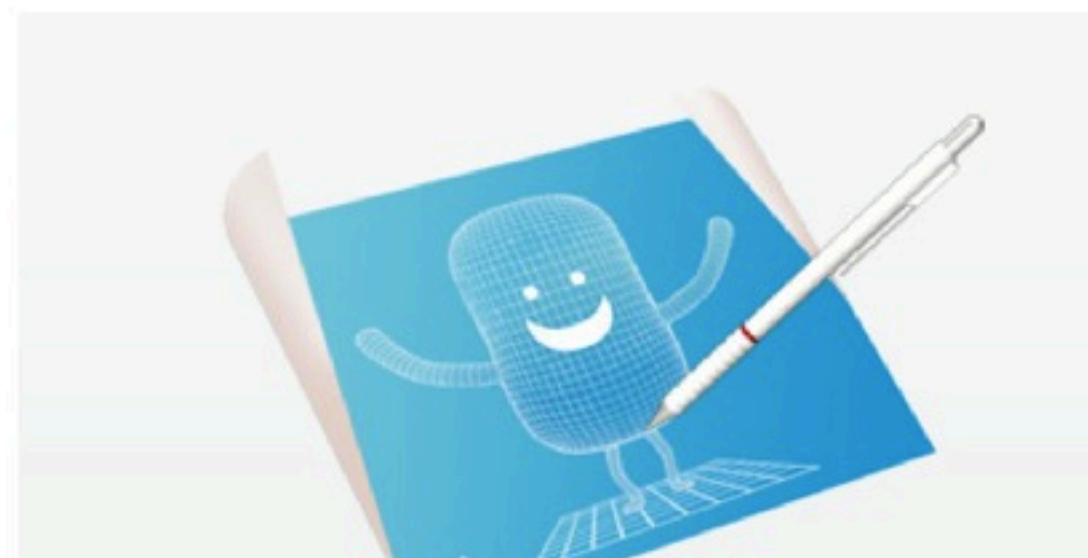
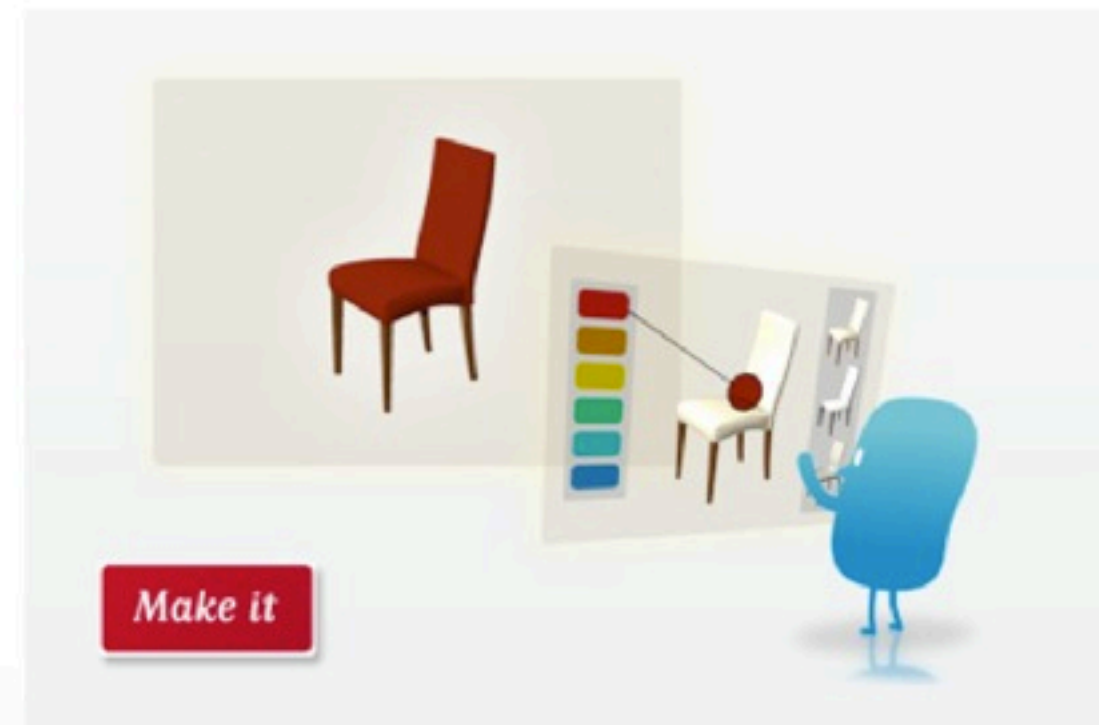
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You'll get an instant in-app price to make your design from the materials of your choice. It couldn't be easier.



The Challenge 123 followers Follow updates

How might we restore vibrancy in cities and regions facing economic decline?

[Read the brief](#)

INSPIRATION	CONCEPTING	APPLAUSE	EVALUATION	WINNING CONCEPTS
99 inspirations	Starts in 26 days	Starts January 03, 2012	Starts January 06, 2012	Announced January 13, 2012



MISSION #1 Explore Vibrancy

Share your definition of what vibrancy looks like where you live. [Find out more...](#)

+ Add your inspiration

MISSION #2 Share Stories

Tell us about the cities and communities you know are currently struggling or in the process of revitalising. [Find out more...](#)

Inspiration

Let's collect examples of existing initiatives and explore the challenge topic to inform our ideas for the upcoming Concepting phase. Watch [our challenge video](#) and check out the selection of Missions on the left. There's a way for everyone to contribute – so pick one Mission, two or all of them. And remember: the more visual you can make your posts the better!



Featured Inspiration

Small Business Saturday

An initiative to inspire shopping at local businesses, *Small Business Saturday* invites Americans to shop small during one of the busiest shopping weekends of the year. After only one year, the program has nearly 2 million 'likes' on Facebook.

Submitted by: [Illana Sclar](#) MISSION #1: [Explore Vibrancy](#)

VIEW BY: [Fresh & Surprising](#) Recent Applause Views Comments

MISSIONS: [All missions](#) Explore Vibrancy Share Stories Get Active Collect Insights Surprise Us

Explore Vibrancy

MISSION #1

Explore Vibrancy

MISSION #1

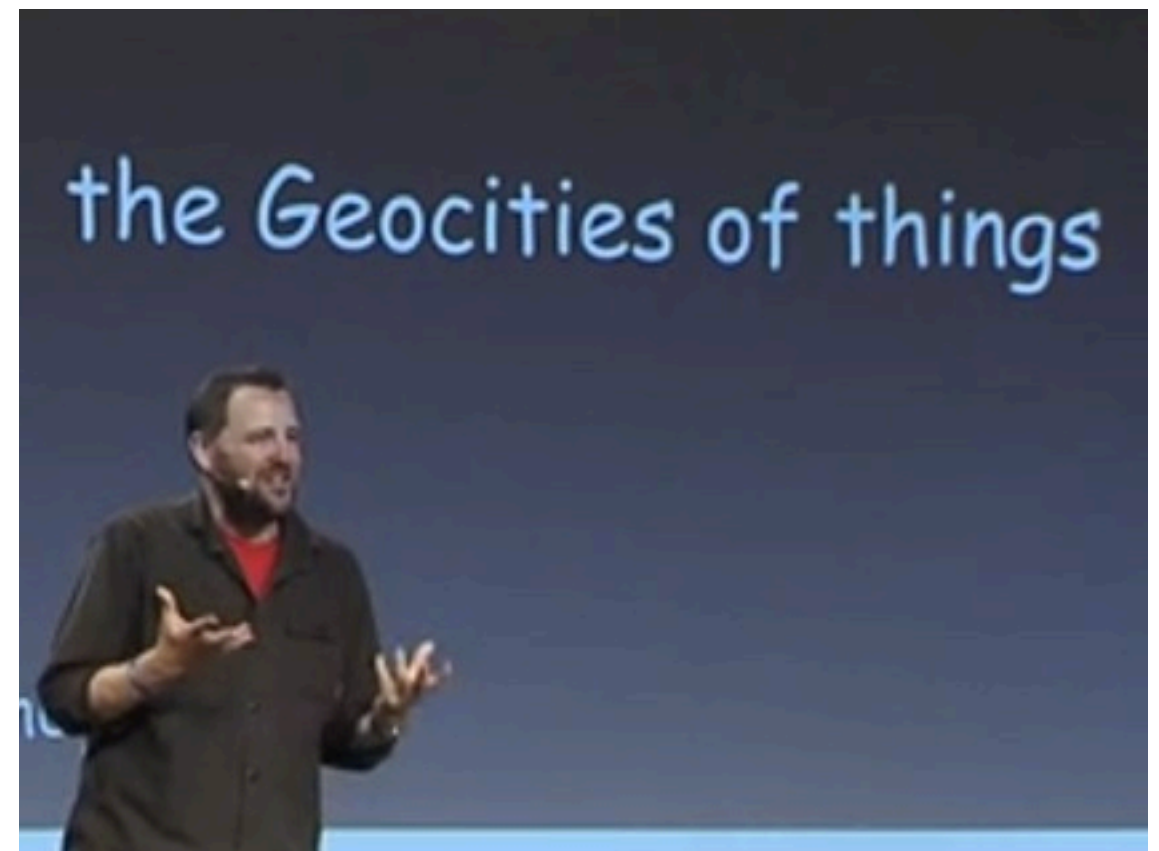
“
Organization/Facilitation - the role is more the conductor than the musician
”
-Tom Hulme

"GEOCITIES OF THINGS"

-RUSSEL DAVIES

People DO want to make things. They don't want to make everything. There is a place for both.

Makey Makey - music making



OTHER EXAMPLES OF HARDWARE MOVING TOWARD SOFTWARE AT IDEO

AN HOMAGE TO THE NUGGET









bea arthur mountains pizza

This is the definitive collection of pictures featuring bea arthur, mountains
and pizza.

[RSS](#) / [Archive](#)

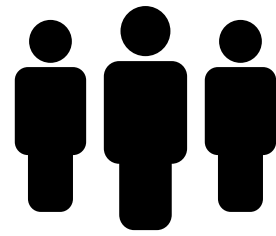
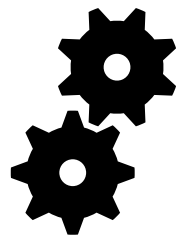
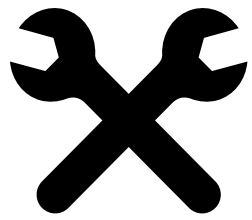
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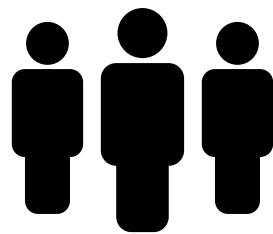
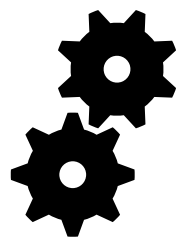
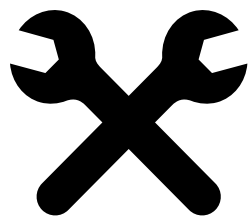
Posted at 12:58 AM 110 notes [Permalink](#) ∞

HOW CAN WE USE SOFTWARE TO INFORM THE DEVELOPMENT OF THE WATCH?

1. Encapsulation & Modularity - We are basing the electronics off of a proven design already being manufactured. Adapter board will be used for design flexibility, then we will adapt and consolidate the module for final production.
2. Obtained proven example code for the associated module to build from.
3. Choosing techniques and materials with low required minimum orders. No housing will be used.
4. It is “Never finished”. For the Kickstarter launch, the highest prize will be to be involved in the beta program. participators will get watches from at least 2 rounds of functional prototype units as well as a production model. These testers will provide feedback on the design to help us improve it.



The rise of new tools, services and communities are empowering people in ways that can sidestep big industry to create. We can be inspired by software to embrace the inherent benefits of designing in this fashion, and create things with a closer connection to the people using them.



Thank You

dvondle@ideo.com

labs.ideo.com

