squidlabs
radical innovation

Squid Labs
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Eric J. Wilhelm, co-founder

Institute for the Future
May 25, 2006

Presentation Overview

What we do

People

Example projects

Instructables

Theory of Instructables

How is it used?

What DIY means for you

Presentation point

The power of the individuals

to

do it themselves

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We make breakthroughs

that reinvent industries

By adding bits to atoms

to reprogram the world

And commercializing our

inventions with spin-outs and licenses

1. Big ideas from us

and industry

2. Develop quick and cheap

with other people's $

3. Commercialize with spin-offs

and licensing agreements

1. Idea
2. Develop
3. Commercialize

Source: *Wired*

Founded Kovio (backed by Vinod Khosla)

Source: *Wired*

9 MIT and Stanford degrees including 4 Ph.D.'s

3 Inventor's Hall of Fame Awards

1 Lemelson-MIT Prize

1 Technology Review Innovator of the Year

2006 Wired Rave Award for Industrial Design

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Our Capabilities

Mechanical
- Mechanical Systems
- Nanotechnology
- Robotics
- Vibration Isolation
- Unmanned Aerial Vehicles
- Physiological Simulations
- Hydraulic Actuators
- Thermal Analysis

Electrical
- Embedded Systems
- MEMS
- Accelerometer Devices
- GPS and GIS Sys
- Solar Power
- PCB Development
- High Speed Digital Signal Processing
- RF Integration

Software
- Firmware Development
- Driver Applications

Industrial Design
- Ergonomics
- Graphic User Interface
- Consumer Research
- Product Design
- Rapid Prototyping
- Short Run Production
- Usability Testing
- Appearance Models

Materials
- Shape Memory Alloys
- Nanowires
- Carbon Fiber
- Aeroelastics
- Thermo-Reactive Textiles

Optics
- Opto-Mechanics
- Deformation Analysis
- High Precision Testing
- Manufacturing System

cross disciplinary

Projects

1. eRope
2. Solar Pavement
3. Howtoons
4. Magic Window
5. Penny Eyeglasses
6. Instructables

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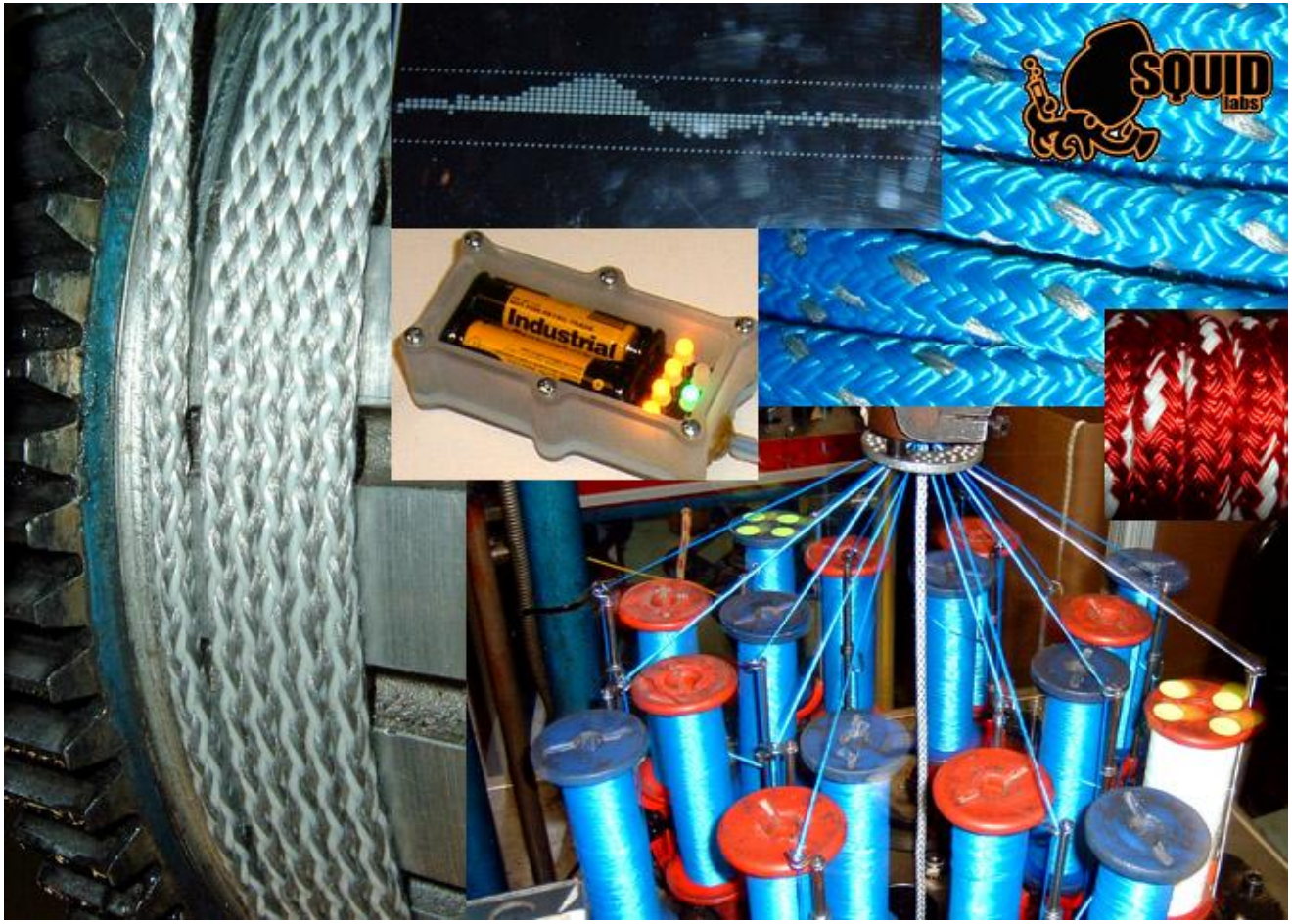

*e*Rope

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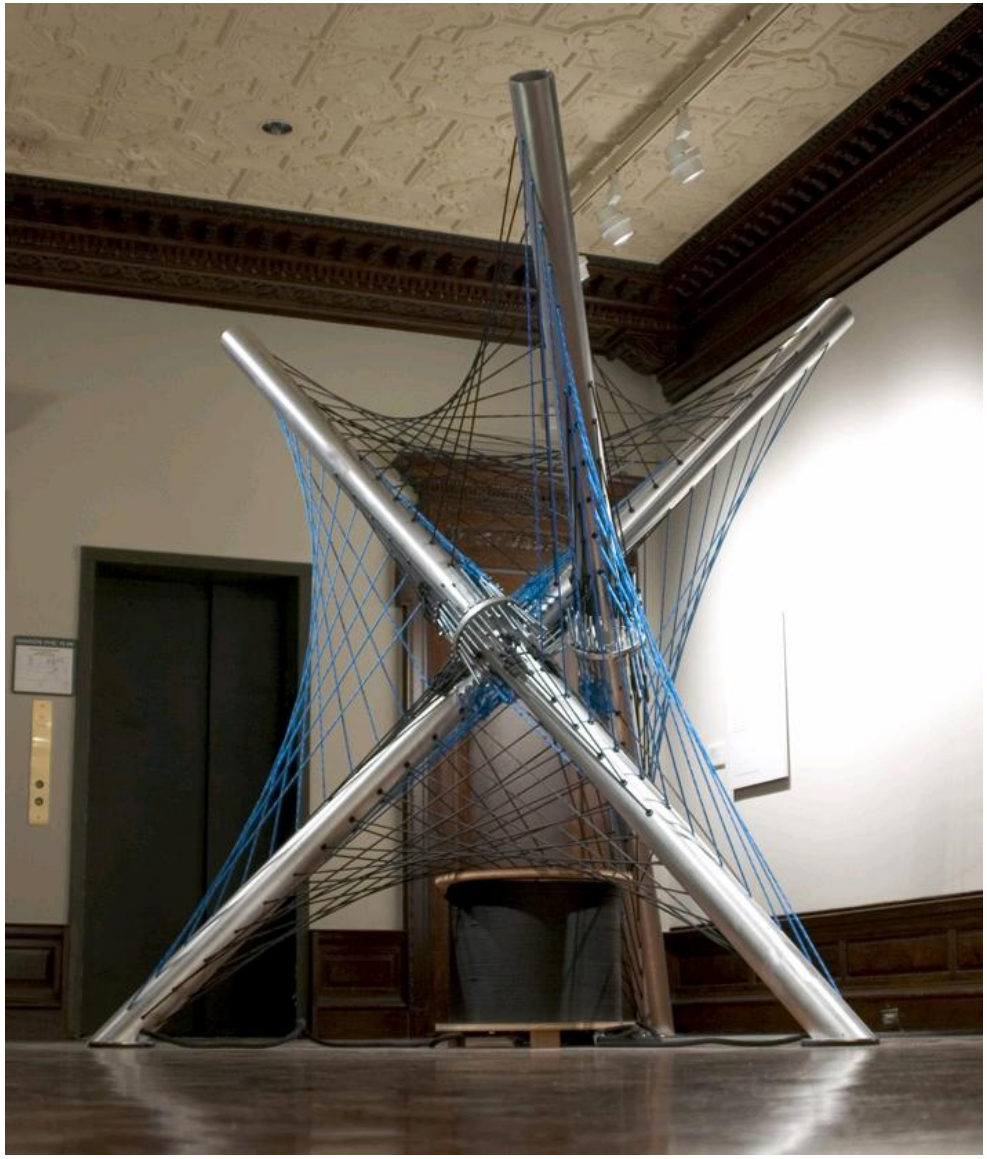

Interactive sculpture at the Smithsonian's Cooper-Hewitt Museum, New York City

eRope

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Solar Pavement

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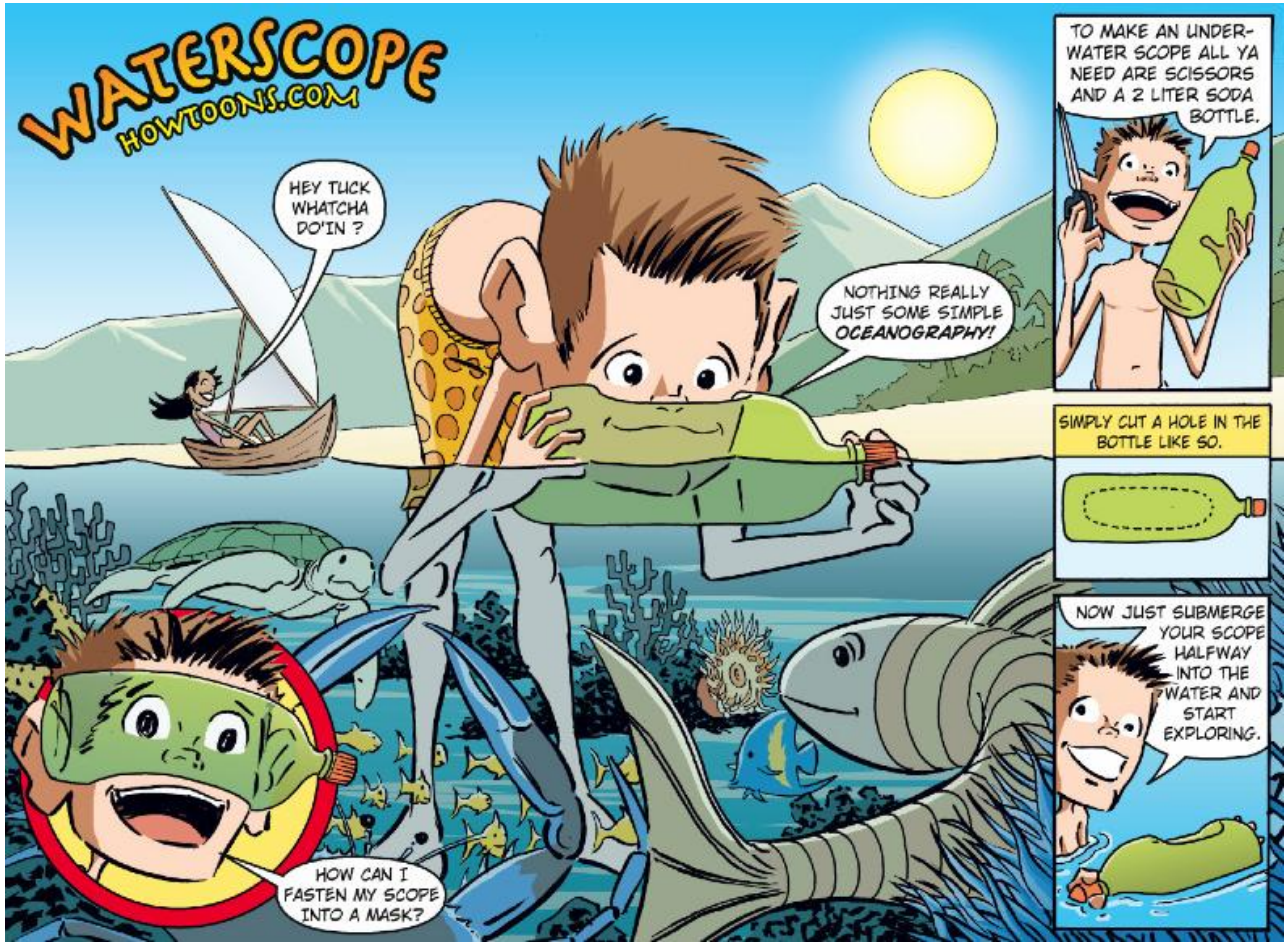

HowToons

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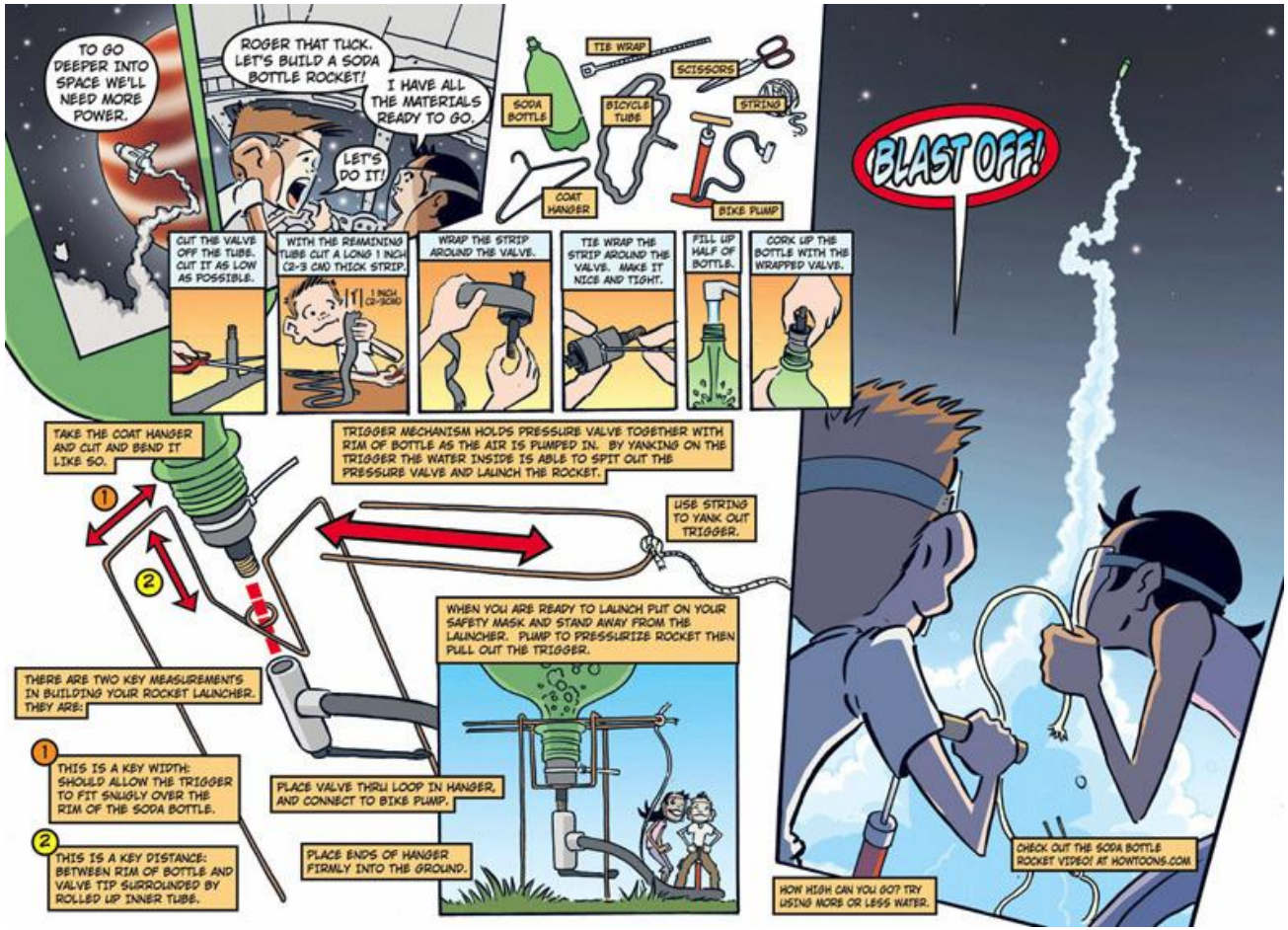

HowToons

Magic Window

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Magic Window

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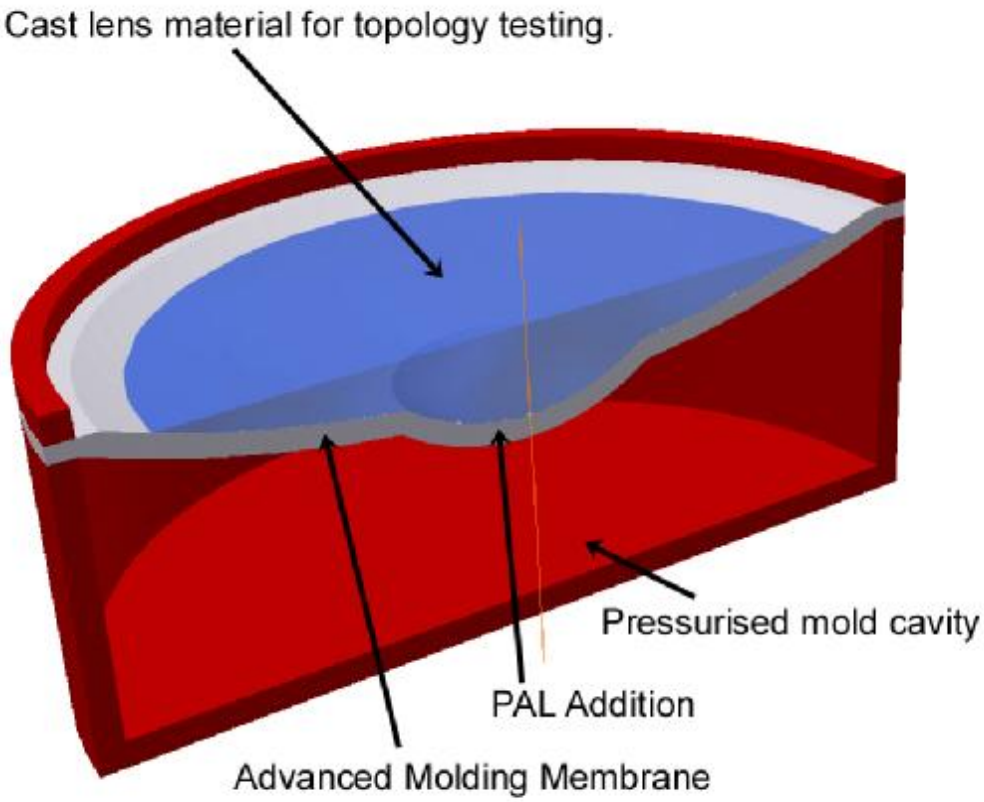
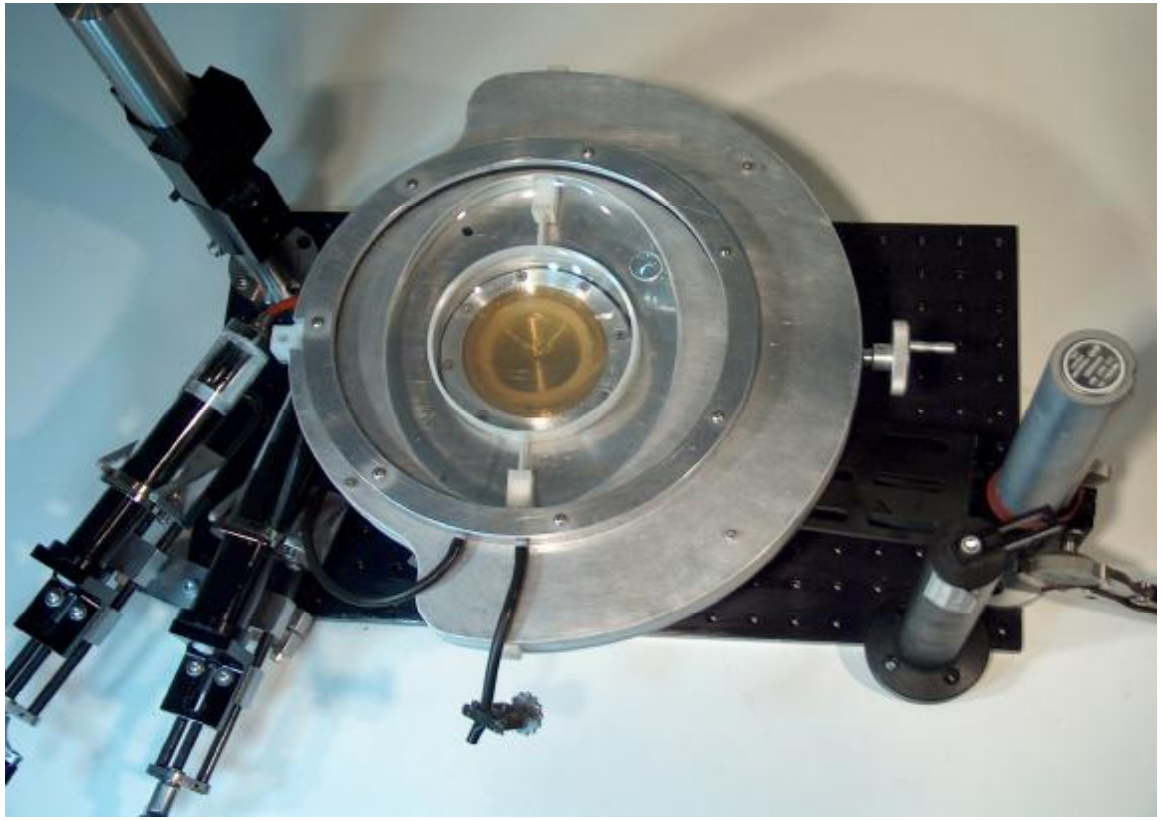
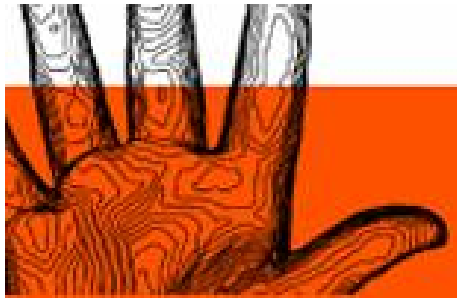


Penny Eyeglasses



Penny Eyeglasses



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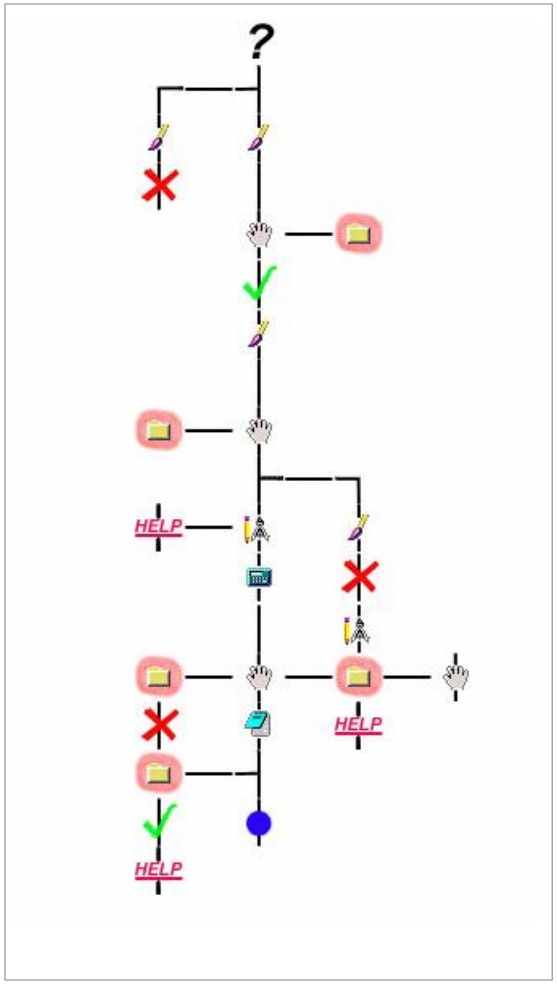
STEP-BY-STEP COLLABORATION

Open-source hardware



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Logged In as 'ewilhelm' settings | help | logout

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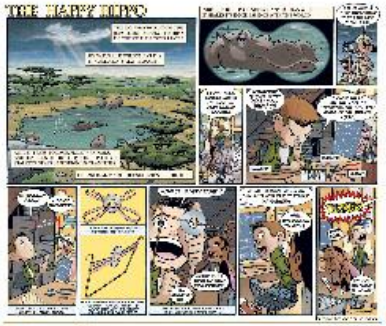
Featured Projects

explore

Marshmallow gun
by ewilhelm



fart machine
by saul

my bitchin ride
by bgoldin

Welcome to Instructables: step-by-step collaboration

Instructables is a venue for showing what you make and how others can make it.

Making things is part of being human. Whether you make bikes, kites, food, clothing, protocols for biology research, or hack consumer electronics, good instructions are critical.

Instructables is a step-by-step collaboration system that helps you record and share your projects with a mixture of images, text, ingredient lists, CAD files, and more. We hope to make documentation simple and fast. Show your colleagues how to operate a machine, show your friends how to build a kayak, show the world how to make cool stuff.

This is new! The interface is still in development. Be nice to us and give us good feed-back.

Learn More

search

Add a Project

Leave Your imprint
Submit new projects here...

Upload Images
Use these in your projects

Tell your friends

.....

“As we may think”
Vannevar Bush
Atlantic Monthly, 1945

“Wholly new forms of encyclopedias will appear, ready-made with ***a mesh of associative trails running through them***, ready to be dropped into the memex and there amplified.”

“One can now picture a future investigator in his laboratory. His hands are free, and he is not anchored. As he moves about and observes, he photographs and comments. Time is automatically recorded to tie the two records together. If he goes into the field, he may be connected by radio to his recorder. As he ponders over his notes in the evening, he again talks his comments into the record. His typed record, as well as his photographs, may both be in miniature, so that he projects them for examination.”

Profoundly influenced the architecture of the web yet the ‘Memex’ and rich sharing of data on the physical world hasn’t yet been realized.

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Open-source car?

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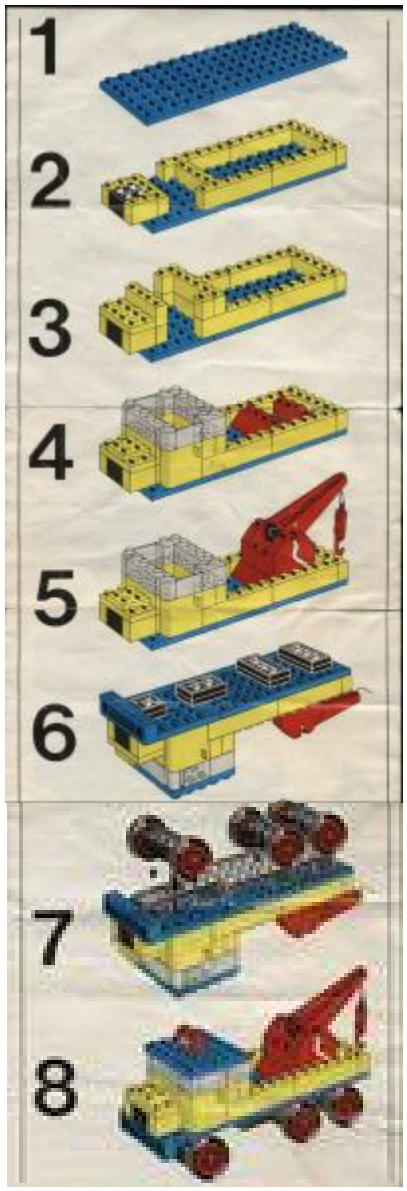


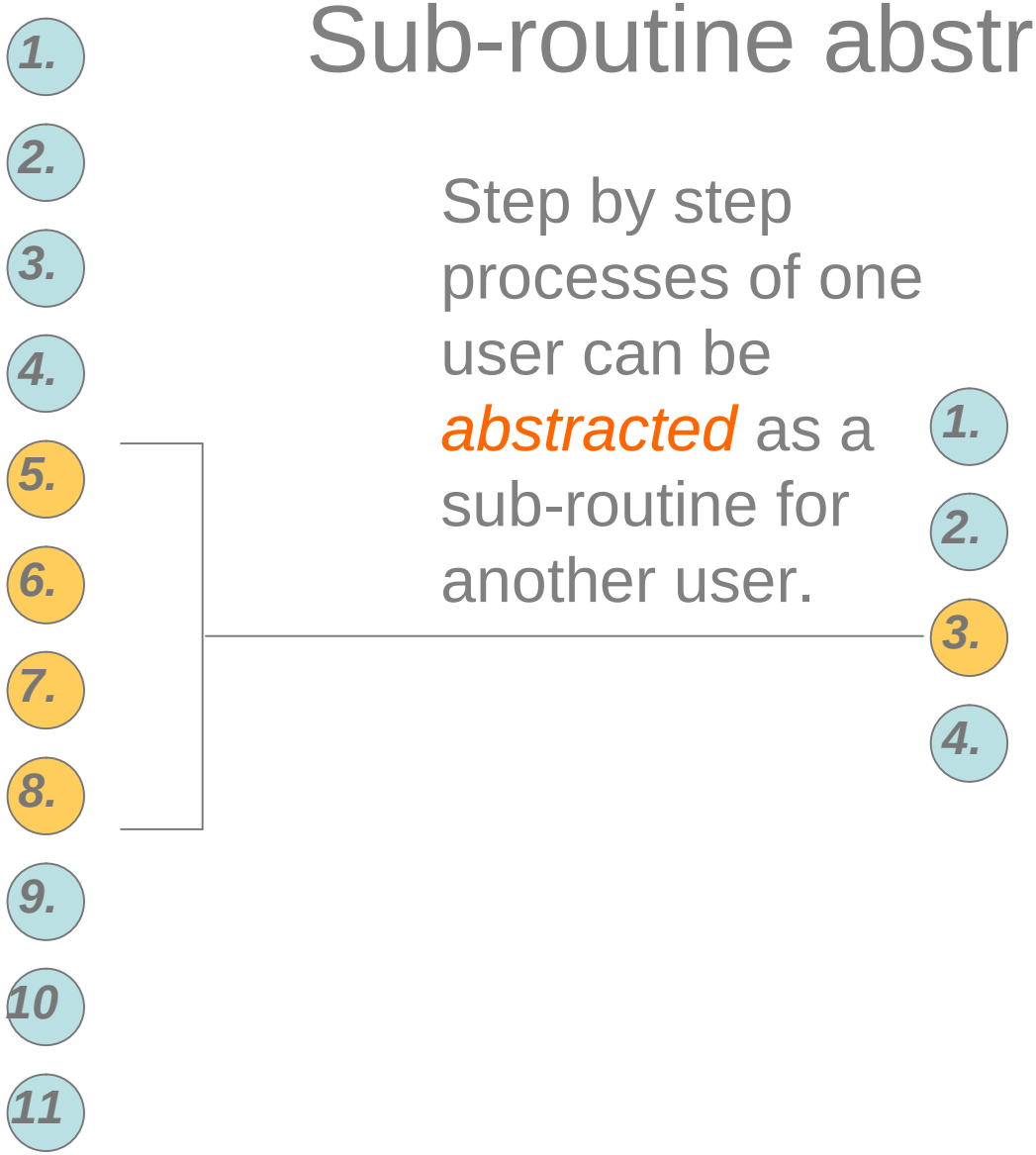
Key insight

The majority of the things people ***make***, or ***do***, can be represented as a linear sequence of steps or instructions.

Key features

Intuitive tools for stepwise documentation, sequencing, and organizing.

Sub-routine abstraction



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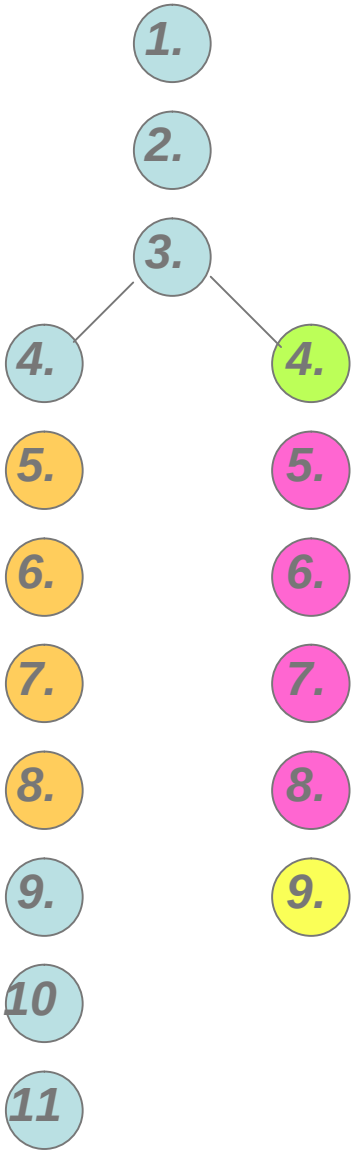
Branching

Intuitive *branching* and personalizing of projects. Common *sub-routines* lower the effort required to document one's projects and/or *deviations* on another persons project.



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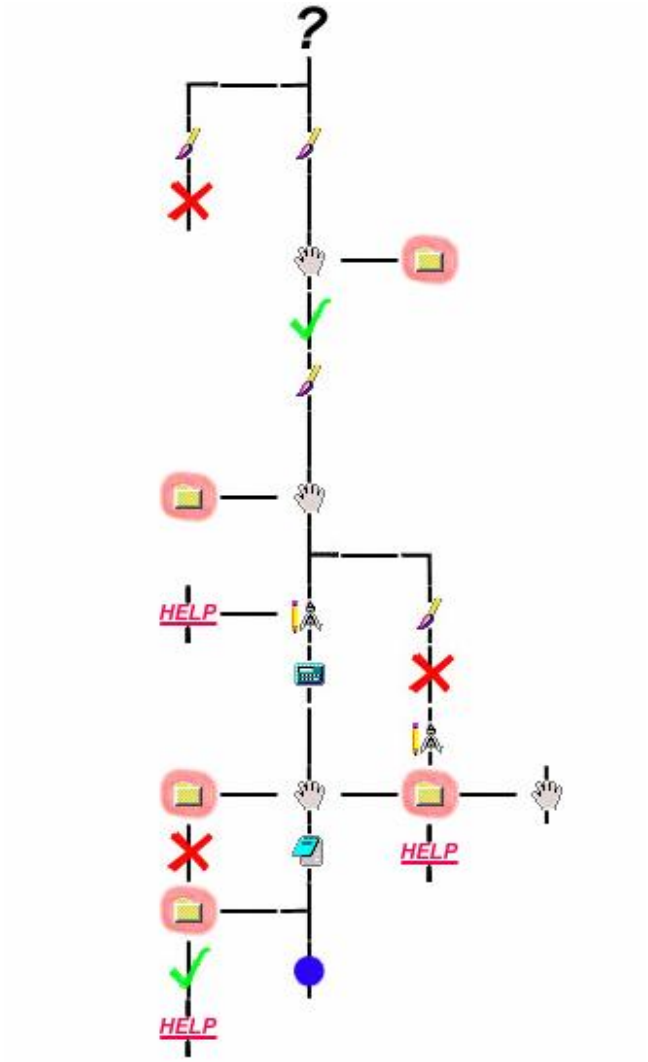
Nonlinear design paths



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Incredible breadth of projects

Teddy Bear Remote Control

The teddy bear remote sits nicely on your sofa or bed and can be used to control your iPod or computer. It's a cute modification to an RF remote control and is surprisingly soft! The project is difficult to make and requires quite a few odd...
posted by leahculver on May 12, 2006
Comments (14)

Make Beer

So, you've considered brewing your own beer but you're not yet willing to drop the cash for the entry level kit just yet. With a few simple pieces of equipment and ingredients here's how you can brew your own mini batch. In just a couple of weeks...
posted by imarunner2 on May 4, 2006
Comments (17)

Hungarian Shelves

First time I saw these shelves was in Budapest, at a friends apartment. I was told they had been designed by a physicist. That's why I think they are safe. The ones in the photos have been up for more than a year now.
posted by juliofo on August 22, 2005
Comments (34)

LED Throwies

Developed by the Graffiti Research Lab a division of the Eyebeam R&D OpenLab, LED Throwies are an inexpensive way to add color to any ferromagnetic surface in...
posted by Q-Branch on February 14, 2006
Comments (161)

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Inspire – be inspired

Motion Sensitive LED Throwies
Designed to be placed/thrown on moving targets, these throwies utilize a crude motion sensor.
posted by rockyt on March 10, 2006
Comments (10)

LEDTHROW - 10010
LEDTHROW Model 10010 is a small circuit board with a CR2032 battery, 2 LEDs, and a 8-pin microntroller with a Cds photocell for programming current time, action times, etc. Glue your magnet to the back of the board. Board is 1.8" x 0.7", very...
posted by zoomcityzoom on April 8, 2006
Comments (22)

LED Throwies
Developed by the Graffiti Research Lab a division of the Eyebeam R&D OpenLab, LED Throwies are an inexpensive way to add color to any ferromagnetic surface in...
posted by Q-Branch on February 14, 2006
Comments (143)

My LED Throwies
This is my version of the LED Throwies project. I'll be using different LEDs and magnets. I just thought it would be nice to post it so everyone could see how it differs from the real, original Throwies. All credit, etc. goes to Graffiti Research...
posted by zildjian on February 25, 2006
Comments (4)

All Surface LED Throwies
An LED throwie that can go on many surfaces and isn't magnetic.
posted by SniperNinja on April 12, 2006

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Users are working together to do real design

Universal Nut Sheller

This machine was invented by Jock Brandis to shell peanuts at the request of a women's coop in Mali, later he would co-found a non-profit development organization called the Full Belly Project...

posted by Roey on May 20, 2006
Comments (26)

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The world is watching

How to make a camera attachment to take 3D Anaglyph Photos!

This device lets you take 3D anaglyph photos and movies with an ordinary camera. The parts cost about $30. It's pretty simple to build and you don't need any special softare or camera equipment. Please let me know if you have any improvements on...

posted by gibbon on May 1, 2006

Comments (20)

"We look to the site for ideas all the time. We're trying to figure out a way to make the 3-D camera into a toy."

-- Project Engineer from a major toy design company

The power of the individuals

to

do it themselves

The power of the individuals

to

do it themselves,

do the research,

build the prototype,

form the company,

have impact.

thank you

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