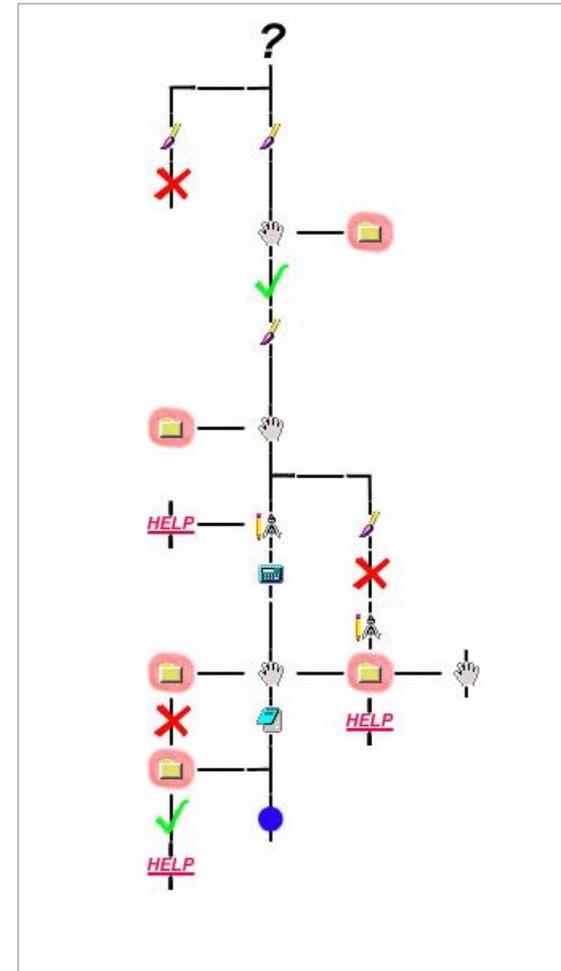


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STEP-BY-STEP COLLABORATION

Open-source hardware

Maker Faire
April 23, 2006



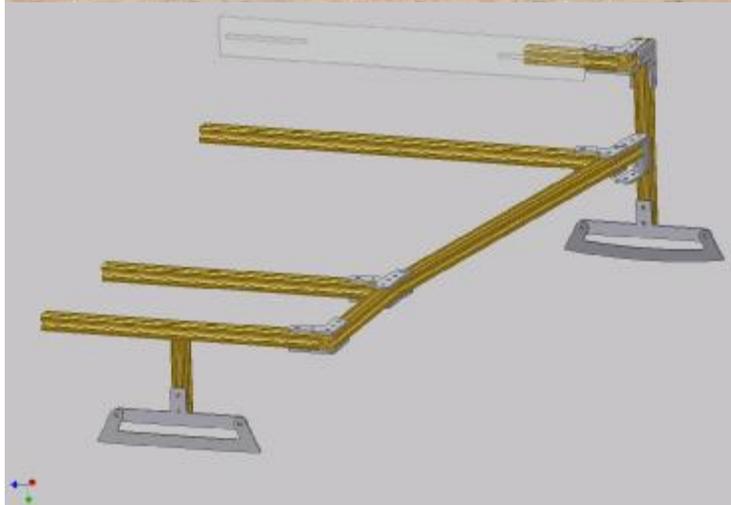


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STEP-BY-STEP COLLABORATION

Passion



Build your own gear



Document and share your gear



3 Mb .mov movie of me kitesurfing (and crashing) at Pleasure Bay, South Boston. (plays in quicktime)



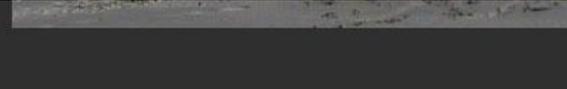
1.6 Mb .mov movie of me kitesurfing at Nahant.

Unsatisfied with commercial kitesurfing boards, I decided to make my own.



[Red planet CAD file \(corel draw file\)](#)

After drawing the shape and graphic for my board, I cut the rough shape out of half inch plywood. I chose an ellipse because I found that the corners on some of the more rectangular boards caught the waves when I rode in surf and tended to trip me. With my aqua colored wet suit and full surfing helmet, people on the beach always ask me where I left my space ship, so I figured I'd put a picture of Mars on my board so they'd know what kind of creature was asking to be taken to their leader.



I sanded the board, applied a coat of stain, and drilled holes for the foot straps and leash. I then printed out the graphic on non-glossy paper with a plotter, gave the board a coat of epoxy, applied the graphic and gave it another coat of epoxy.



Document and share your gear



[RIWUIT](#)

Marshallese toy outrigger sailing canoes. Brilliant Micronesian engineering. Includes detailed plans so you can build your own!



[Kiteboard Cookbook](#)

Top scientists reveal the secrets of dozens of amazing kiteboards and show you how to make your own in mere minutes!



[Kite Bar Cookbook](#)

Control systems for power kites.



Make Your Own Kiteboard Foot Pads



Make Your Own Underwater Camera Enclosure



[Chuck Shipman](#)



[\(Almost\) to Cuba by](#)

[Homemade Airplane](#)



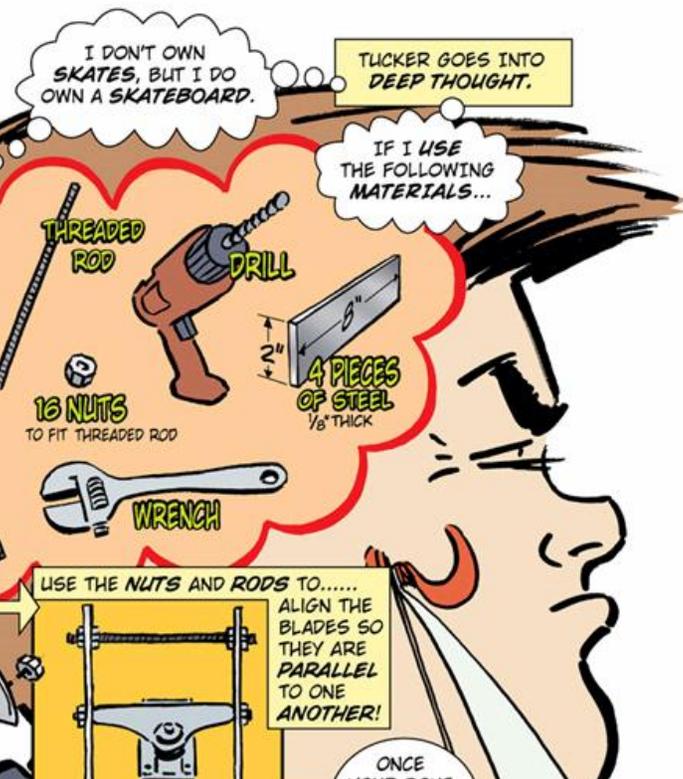
HEY TUCKER! GRAB YOUR SKATES!



YOU KNOW I DON'T OWN A PAIR OF SKATES!



HEY, WAIT A SEC.



I DON'T OWN SKATES, BUT I DO OWN A SKATEBOARD.

TUCKER GOES INTO DEEP THOUGHT.

IF I USE THE FOLLOWING MATERIALS...

THREADED ROD

DRILL

4 PIECES OF STEEL
1/8" THICK

16 NUTS
TO FIT THREADED ROD

WRENCH

FILE

OLD SKATEBOARD

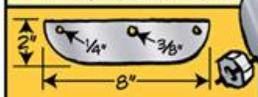


...I CAN MAKE AN ICEBOARD! IT'LL BE THE GNARLIEST THING ON ICE. FIRST, I GOTTA GET THESE WHEELS OFF. THEN...

ASSEMBLE BLADES TO TRUCKS, USING RODS AND BOLTS.

USE THE NUTS AND RODS TO..... ALIGN THE BLADES SO THEY ARE PARALLEL TO ONE ANOTHER!

...USING THE STEEL, CUT & FILE 4 MATCHING BLOCKS. THEN, DRILL HOLES.



USING THE FILE, SHARPEN EACH BLADE.....



JUST... LIKE A GREAT SAMURAI!

THE MOST IMPORTANT ASPECT OF BUILDING AN ICEBOARD ARE THE BLADES. ALL THE BLADES EDGES NEED TO BE SHARPENED TO 90 DEGREES. SHARP EDGES MAKE YA GO FASTER AND TURN HARDER. SO GET FILING!

ONCE YOUR DONE GET RAD ON THE ICE OR....



OR BUILD A SAIL!

THE POSSIBILITIES ARE ENDLESS!!!

Howtoons.com
THE ICEBOARD

Inflatodesign: one of 40000 hobbyist yahoogroups

The screenshot shows a Mozilla Firefox browser window displaying the Yahoo! Groups page for the 'Inflatodesign' group. The browser's address bar shows the URL 'http://groups.yahoo.com/group/Inflatodesign/'. The page features a navigation menu on the left with options like Home, Messages, Chat, Files, Photos, Links, Database, Polls, Members, Calendar, and Promote. The main content area includes a 'Join This Group!' button, a description of the group's focus on inflatable leading edge kites, and a 3D rendering of a kite. A 'What's New' section reports 8 new members and 3 new messages in the last seven days. On the right, a 'Group Info' sidebar lists 646 members, creation date (Sep 30, 2002), and group settings such as open membership and message approval requirements. The Windows taskbar at the bottom shows the start button, several open applications, and the system clock at 2:46 PM.

Yahoo! Groups : Inflatodesign - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://groups.yahoo.com/group/Inflatodesign/

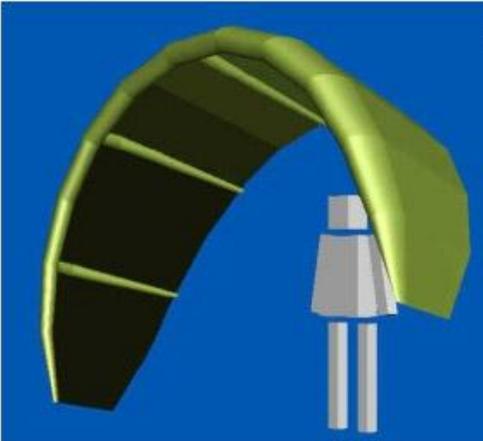
Search the Web Search

YAHOO! GROUPS Sign In New User? Sign Up

Inflatodesign [Join This Group!]

Join This Group! (Already a member? [Sign in to Yahoo!](#))

Description Category: [Experimental Aviation](#)



For the discussion of Inflatable Leading Edge Kites design (for kitesurfing and other kinds of power kiting activities).

What's New

New within the last seven days:

Members:	8	Messages:	3
Files:	1		

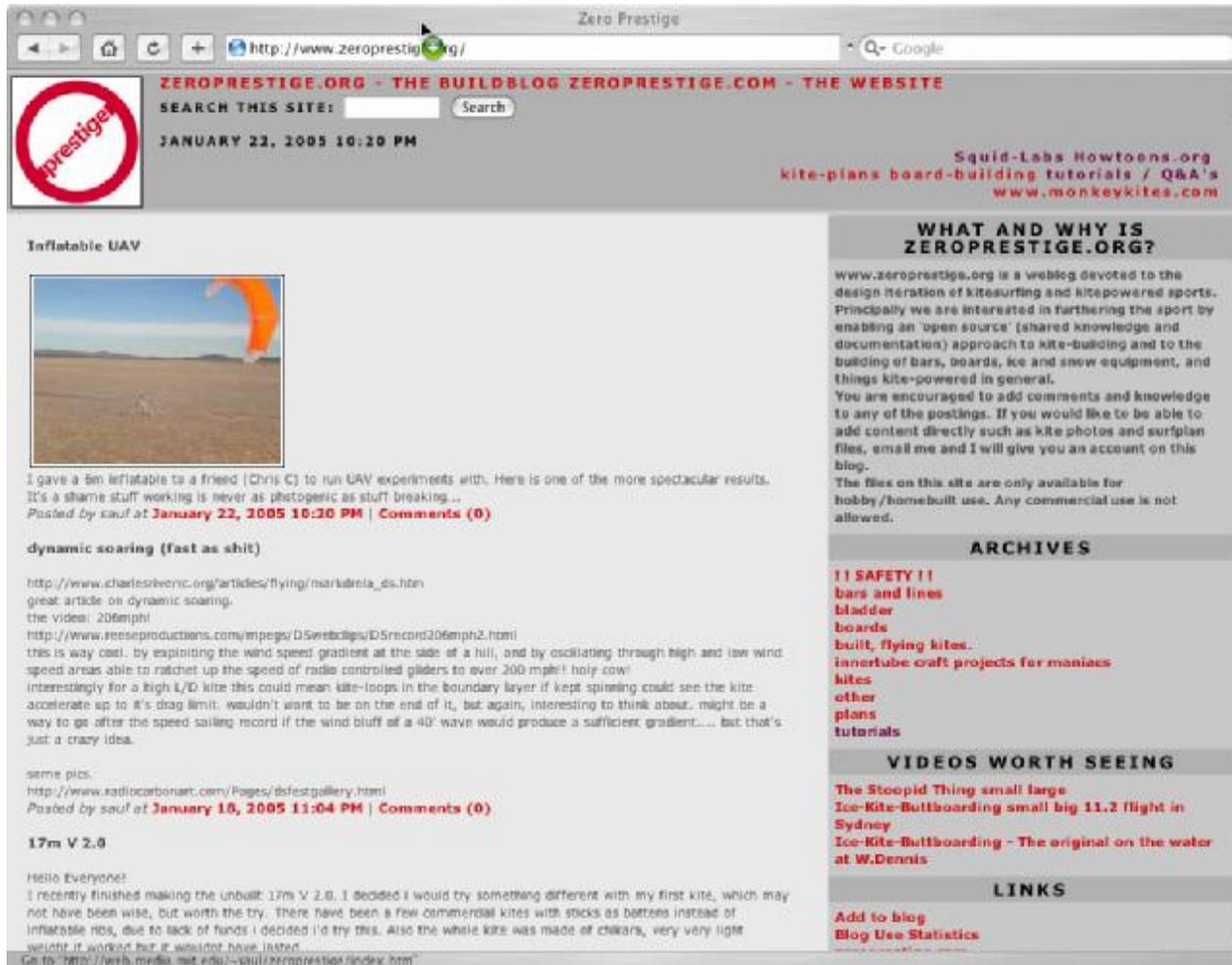
Group Info

Members: 646
Created: Sep 30, 2002
Language: English

Group Settings

- Listed in directory
- Open membership
- Messages from new members require approval
- All members may post messages
- Message archive viewable by members only
- Email attachments are permitted

start | 3 Window... | Inbox for r... | Java - Acco... | 4 Firefox | UltraEdit-32... | 90% | 2:46 PM



Zero Prestige.org - Open source approach to kite and kite powered vehicle design, tens of thousands of visits; up to 400 kites built from these plans.





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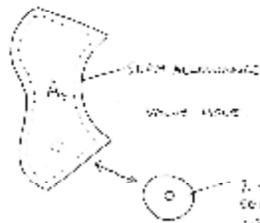
SEWING RIBB



1. IN THE
TUTORIAL I USED

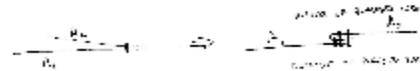
- * A₂ & A₁ SHOULD BE CUT AS ONE PIECE
- * I'M NOT 100% SURE ON RECOMMENDATIONS

1a.

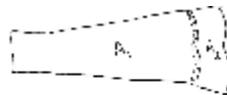


1 - 2.5" DIAMETER
CUT AROUND THIS
FOR VALUE HOLE
FINISHING POINT.

2a. PART VALUE SEAM A1/A2

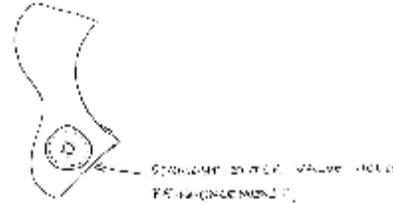


STEP A₂ SEAM WITH PART VALUE HOLE
WITH SEAMING A₁ (VALUE HOLE) FROM
THE SEAM IS THE POINT
FOR THE SEAMING THE SEAMING IS THE
POINT OF THE SEAM THE POINT
FOR THE SEAMING THE SEAMING IS THE
POINT OF THE SEAM THE SEAMING IS THE
POINT OF THE SEAM THE SEAMING IS THE
POINT OF THE SEAM



2b. SEWING FOR A1/A2 & A3/A4 etc.

1b.



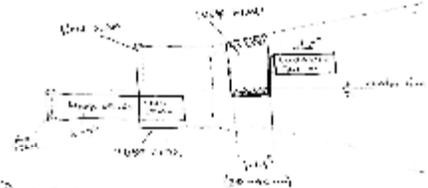
SEWING SEAM VALUE HOLE
FINISHING POINT.

2c. SEWING THE PART TOUCH-UP



1. IN THE
TUTORIAL I USED
2.5" DIAMETER
CUT AROUND THIS
FOR VALUE HOLE
FINISHING POINT.

3a. SEW VALUE TABS ON TUBE END



3b. CUT PART OF A₁ AND PART OF A₂ WITH
THE SEAMING ON THE SIDE WITH THE SEAM
ALLOWANCE & THE OTHER SIDE WITH THE
SEAMING ON THE SIDE. * MAKE SURE TO
CUT THE SEAMING ON THE SEAMING OF
THE RIBB, NOT ON THE SEAMING OF THE
TUBE.

3c. SEW A SEAM ON TUBE END WITH SEAM ON
THE TUBE END.

3d. SEW A SEAM ON TUBE END WITH SEAM ON
THE TUBE END.

3e. SEW A SEAM ON TUBE END WITH SEAM ON
THE TUBE END.



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The screenshot shows a Windows desktop environment. The background application is 'tp5 foil (tp5.sle) - SurfPlan', which displays a 3D model of a kite with a grey canopy and a blue and yellow striped leading edge. The kite is suspended by a network of lines. In the foreground, a 'Notepad' window titled 'IP5.txt' is open, displaying technical specifications for the kite's bridle.

```
IP5.txt - Notepad
File Edit Format Help
Bridled as a 4-line kite
Centre bridled at 18.0%
Tip bridled at 18.0%
Measurements given in mm

Primary Bridle
           A           B           C           (D)Brakes
Rib 1           444           455           481           429
Rib 3           527           515           543           545
Rib 5           790           780           833           816
Rib 7           934           916           961           959
Total Primary bridle = 21.85m (+15% for knots = 25.13m)

Secondary Bridle
           Power           Brakes
Rib 1           881           886
Rib 5           694           733
Total Secondary bridle = 6.39m (+15% for knots = 7.34m)

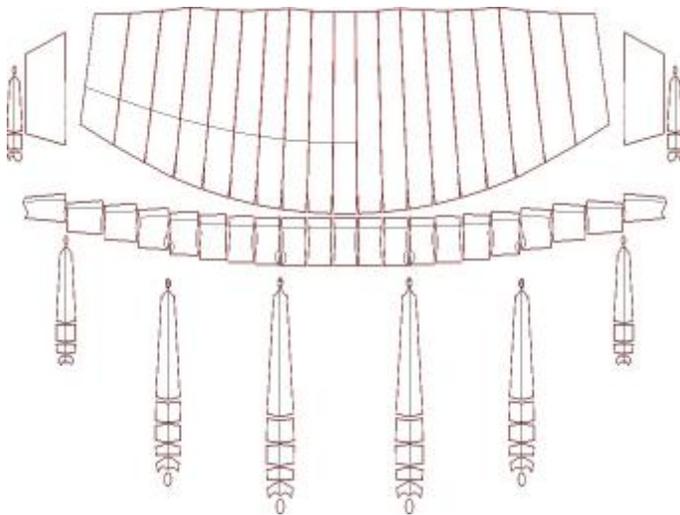
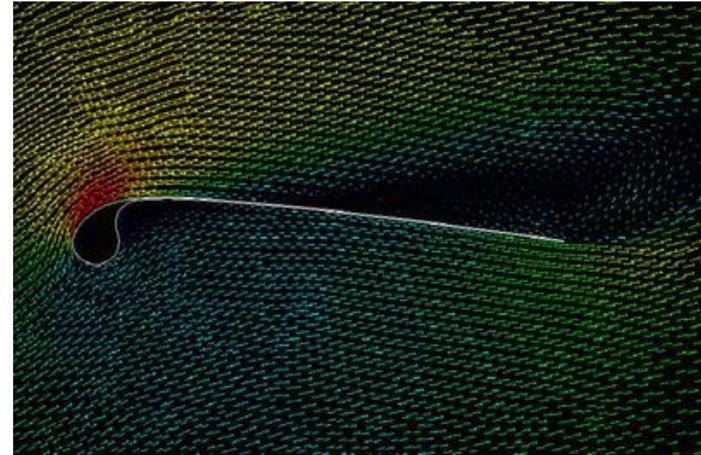
Main towpoint separation = 988
Brake towpoint separation = 988
```

The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the time 6:40 AM.



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Traditional "cut" tabling: This diagram shows a cross-section of a sail edge with a piece of tabling material attached. The text states: "Traditional 'cut' tablings maintain cloth direction along a curved or diagonally cut sail edge."

Rolling tabling: This diagram shows a cross-section of a sail edge where the tabling is rolled over the sail. The text states: "A 'rolled' tabling is fast and durable but does not maintain cloth direction. Moreover, a hollowed sail edge will be tight; a rounded edge, floppy."

Hot-knifed edge: This diagram shows a cross-section of a synthetic sail edge with a hot-knifed edge. The text states: "Hotknifing, folding over, and sewing the sail edge is a fast production technique that saves cloth and weight."

Wiring the luff: A diagram shows a cross-section of a sail luff with a rope and a straight stitch. A red circle highlights the text: "To install a wire in the luff of a sail with a cut tabling the tabling and sail are first straight-stitched together." A green double-headed arrow below indicates a width of "10-12mm". A blue label "zig-zag stitch" points to the stitching.

FIGURE 6-11 (PAGES 243-244): Various ways of finishing the edges of a sail with cloth—known as tablings.

Document and share your gear
what people make:



from the sublime : coffee cup ramjet

What people make:

Surrounded by passion



to the ridiculous : Tron Guy



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SourceForge.net: Project of the Month: March 2005

http://sourceforge.net/potm/potm-2005-03.php

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PROJECT OF THE MONTH

MARCH 2005

OGRE

Welcome to SourceForge.net's Project of the Month. Every month the team at SourceForge.net picks one project, from among the tens of thousands hosted on SourceForge.net, to honor by naming it Project of the Month. The goal is to bring some attention to deserving projects who are striving to make a difference in the world of Open Source Development.

Check out our previous [projects of the month](#)

Project of the month: OGRE

OGRE is a multiplatform 3D engine with a focus on strong design, clean implementation, extensibility, and maintainability. It adheres to object-oriented principles and clean coding standards, while providing a blisteringly fast 3D renderer with support for all the latest hardware features of DirectX 9 and OpenGL, including support for all low- and high-level shader languages, multiple shadow techniques (including custom shader-based techniques), and HDR.

Project Name: Ogre
Founded / Started: 1999
URL: <http://www.ogre3d.org/>
Project page: <https://sourceforge.net/projects/ogre/>

Description of project:

An efficient, object-oriented hardware accelerated 3D engine. It abstracts the differences between APIs and platforms and allows scene-oriented coding through an easy to use object model. Adaptable to multiple scene types (indoor, outdoor, whatever)

Trove Info:

Key Developers:

- 
Steve Streeter
- 
Thomas Muldowney
- 
James O'Sullivan
- 
Wladimir J. van der Laan



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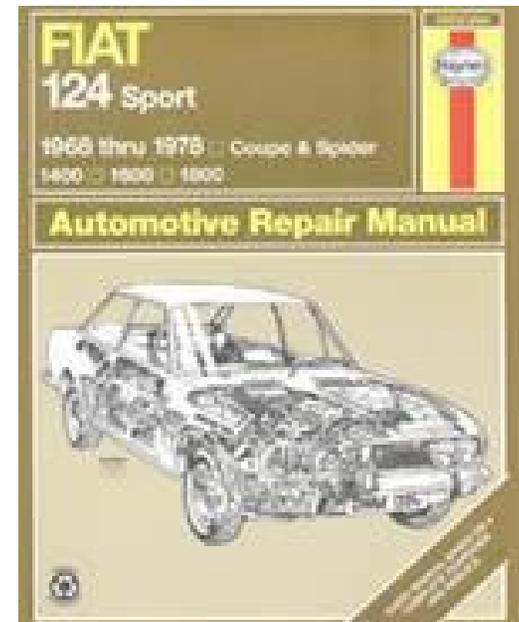
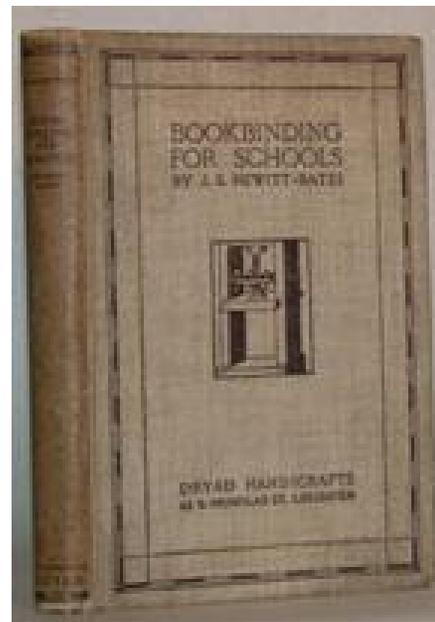
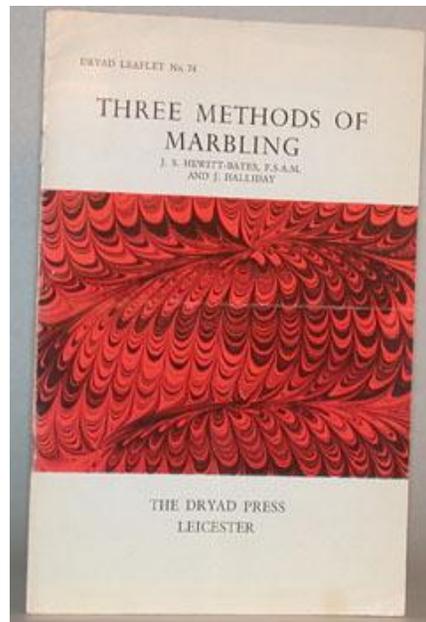


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Harry Peach, William Morris, Crafts revival, DRYAD
LEAFLETS c.1910

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So, what's new?



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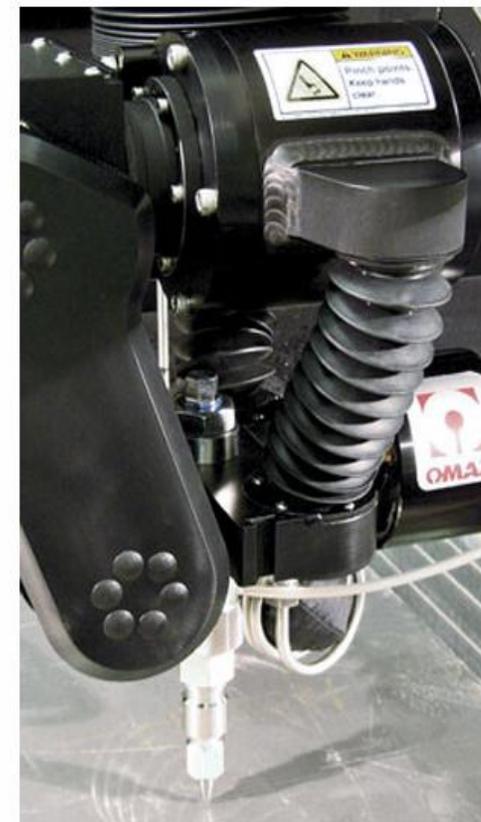
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2652 Product information





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Hot Items for Back to School



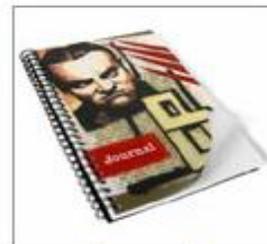
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bike2_ex.jpg (JPEG Image, 770x450 pixels) - Scaled (96%) - Mozilla Firefox



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Designed to complement an existing waterjet system, the 2052 is a complete line of machining centers, pumps, controllers, software, and accessories.

Designed to complement an existing waterjet system, the 2052 is a complete line of machining centers, pumps, controllers, software, and accessories.

They have a waterjet...

Where are their CAD files?



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<input type="checkbox"/>	 Antique wood caster wheels for furniture matched sets	\$1.99	1	21h 54m
<input type="checkbox"/>	 2 8" Air Tire Swivel Casters Caster Wheel Wheels 	\$9.95 \$18.95	- <i>Buy It Now</i>	22h 51m
<input type="checkbox"/>	 NEW 3 X 1.25 Swivel Caster with Ball Bearing Wheel 	\$3.35	<i>Buy It Now</i>	1d 01h 59m
<input type="checkbox"/>	 NEW 4EA 7.5IN DIAMETER PLASTIC CASTER WHEEL (S) 	\$2.25	2	1d 02h 36m



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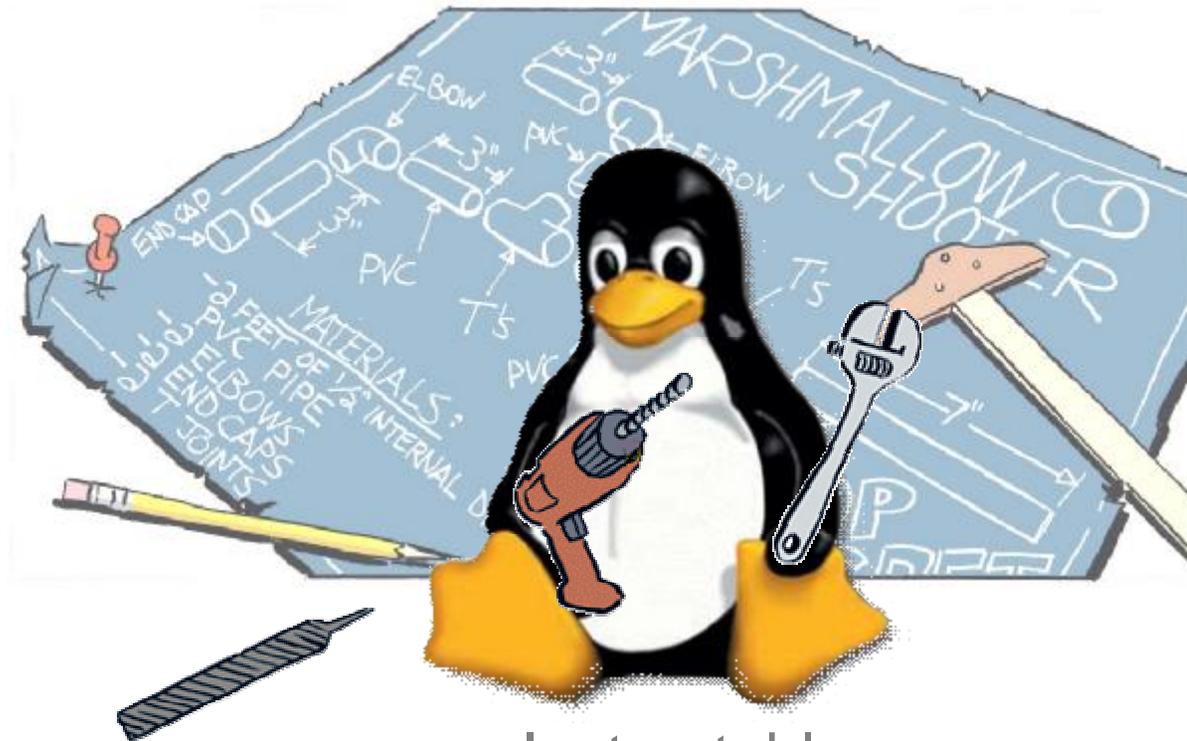
Lowered threshold for documentation and collaboration plus lower threshold for making things yields custom, local solutions.



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Here's our first stab at facilitating custom, local solutions



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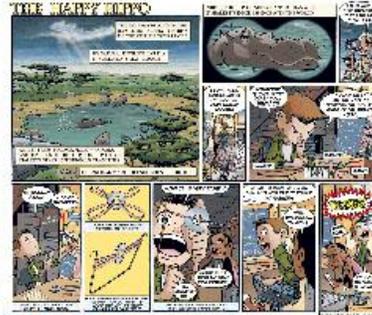
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Making things is part of being human. Whether you make bikes, kites, food, clothing, protocols for biology research, or hack consumer electronics, good instructions are critical.

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](#).

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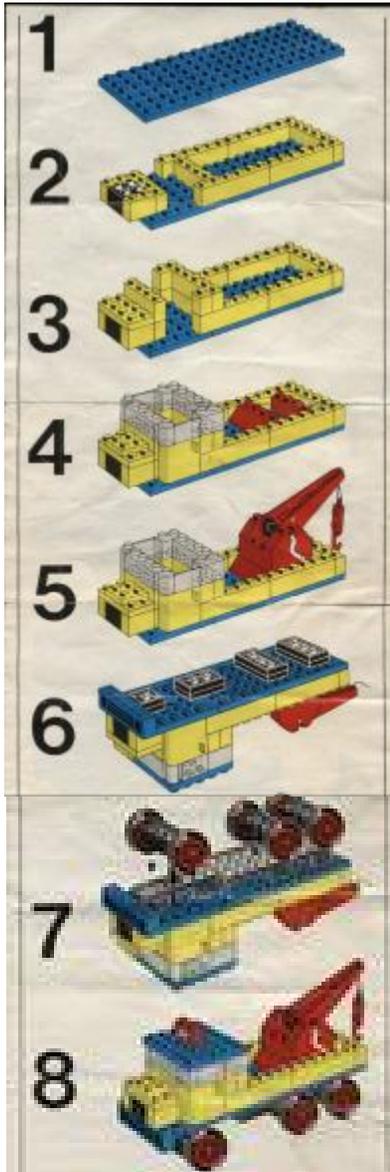
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STEP-BY-STEP COLLABORATION



Key insight

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



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Key features

1.



2.



3.

Intuitive tools for
stepwise
documentation,
sequencing, and
organizing.



Sub-routine abstraction

1.

2.

3.

4.

5.

6.

7.

8.

9.

10

11

Step by step processes of one user can be abstracted as a sub-routine for another user.

1.

2.

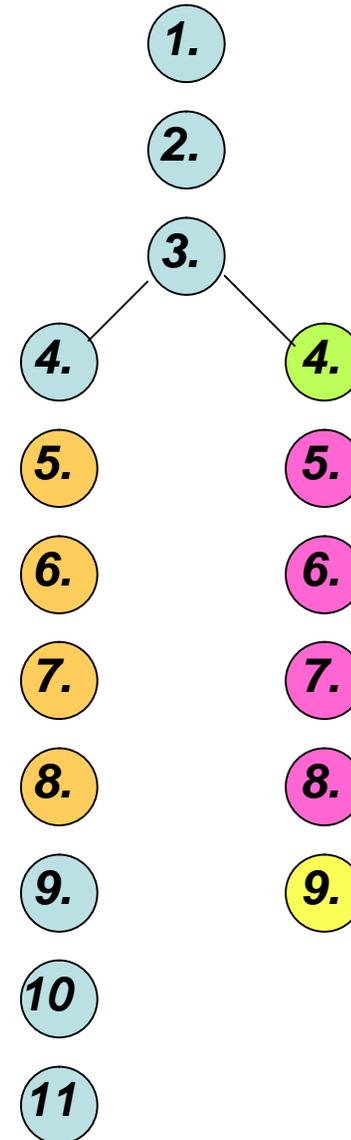
3.

4.



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.

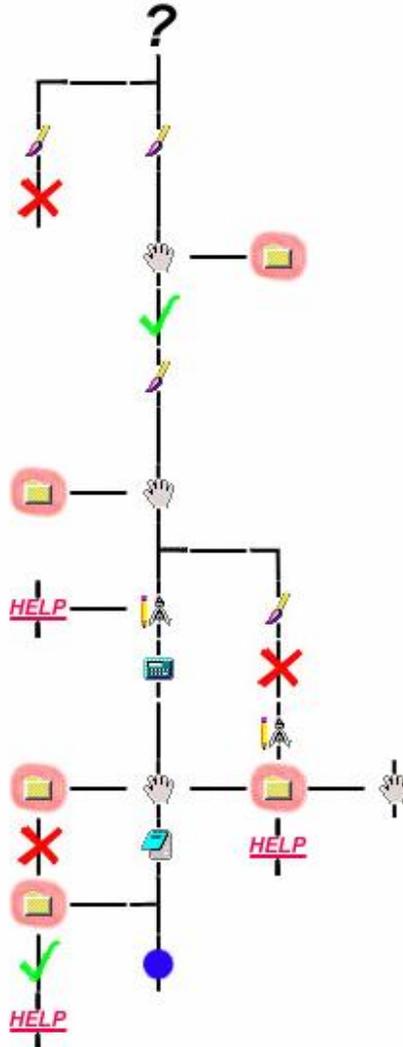




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Nonlinear design paths





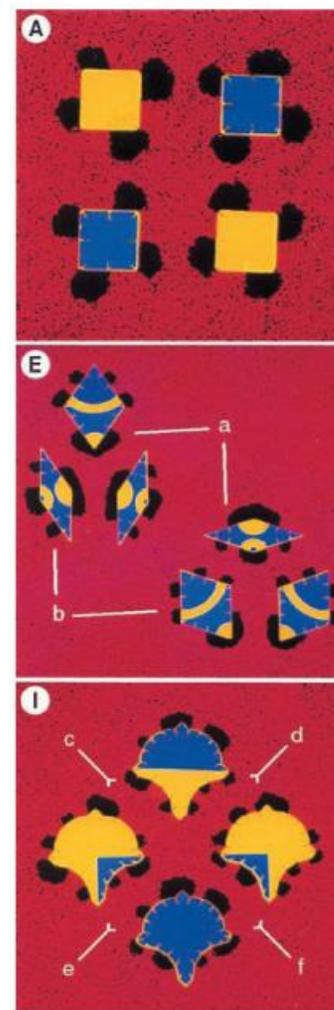
Methods section

Materials and Methods

Preparation of Tiles. All tiles were laser-cut (ULS 25, Universal Laser Systems, Scottsdale, AZ) from 3-mm fluorescent yellow cast acrylic (Solter Plastics, Los Angeles). Before cutting, the bottom of the acrylic was made hydrophilic (L) by wetting it with cyanoacrylate ester (Zap-O, Pacer Technology, Rancho Cucamonga, CA) and dusting with silica gel (type G, Sigma) three times. The top of the acrylic was sprayed fluorescent blue. Patterns indicating matching rules were created by burning away paint at a low power setting. Notches (1 mm deep, 0.2 mm wide) were cut between regions to be made hydrophobic (F) or L. Tiles were cut from the acrylic sheet at a high power setting, stacked, and covered in tape. Using the notches as guides, tape was cut away from regions to be made L. The resulting stacks of tiles were wet with cyanoacrylate and dusted with silica three times, yielding a layer of cyanoacrylate/silica ≈ 0.1 mm thick. F patches were deprotected and painted with fluid (naphtha, butadiene rubber, butyl Cellosolve) from an F slide marker (PAP Pen, RPI, Mount Prospect, IL) diluted 7:1 in hexane.

Visualization of the Meniscus. F sand (CENCO, Franklin Park, IL) was sprayed with red fluorescent paint. Visualization of L patches was performed by adding 30 mg sand/cm² interface between mineral oil (Aldrich, 0.83 g/ml) and aqueous sodium metatungstate (Geoliquids, Prospect Heights, IL, 1.65 g/ml).

SA. All experiments used an *n*-hexadecane (Sigma, 0.77 g/ml) superphase and an aqueous sodium metatungstate subphase. Tiles were shaken with an AROS 160 shaker (Barnstead-Thermolyne, 3.8-cm orbit). Before use, tiles were soaked 30 min in water. The tiles in Fig. 2 were placed in a 10-cm square box with 100 ml of subphase and 50 ml of superphase, disaggregated with forceps while shaken at 78 rpm so that $\approx 50\%$ of bonds were broken, and equilibrated at 75 rpm. The ratio of L/F bonds was stable after 30 s but data were taken after 5 min. C tiles were shaken in an 18-cm square glass dish with 120 ml of superphase and 120 ml of subphase (1.65 g/ml) for 5 min at 44.5 rpm, 15 min at 40.9 rpm, 45 min at 37.6 rpm, 135 min at 34.0 rpm, 405 min at 30.6 rpm, and 1,215 min at 27.0 rpm. P tiles were shaken in a 38-cm square glass box with 450 ml of superphase and 1,100 ml of subphase (1.65 g/ml) for 3 h at 22.6 rpm, 6 h at 21.8 rpm, 12 h at 21.1 rpm, 24 h at 20.5 rpm, 48 h at 19.8 rpm, 48 h at 19.0 rpm, 24 h at 18.3 rpm, 24 h at 17.6 rpm, and 24 h at 16.9 rpm. XOR





Open-source car?





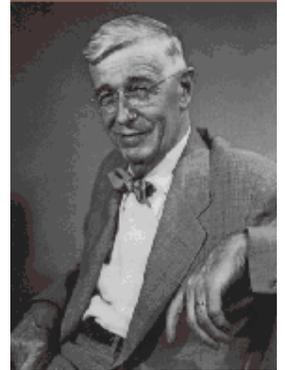
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“Wholly new forms of encyclopedias will appear, [ready-made](#) with a mesh of associative trails running through them, ready to be dropped into the memex and there amplified.”

“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.”

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



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



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 microcontroller 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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thank you

squidlabs
radical innovation

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