

*IEEE Consumer Electronics Society*

## 2016 Maker Faire Download



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# Maker Theme

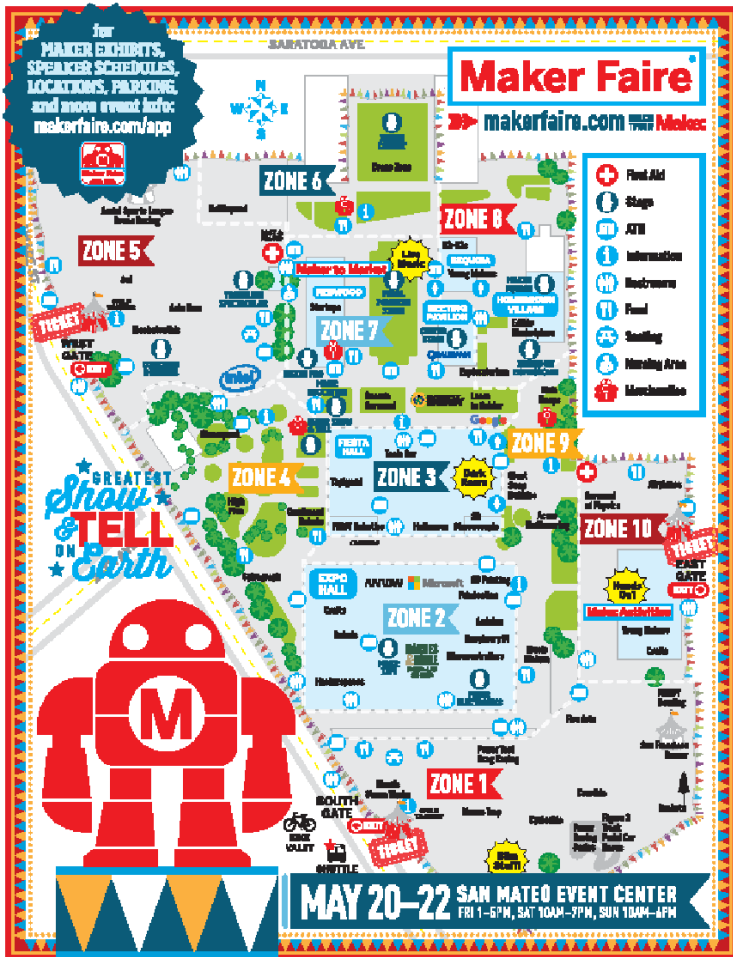


“Maker Faire is the Greatest Show (and Tell) on Earth—a family-friendly festival of invention, creativity and resourcefulness, and a celebration of the Maker movement.”  
-MakerFaire.com

‘Part science fair, part county fair, and part something entirely new, Maker Faire is an all-ages gathering of tech enthusiasts, crafters, educators, tinkerers, hobbyists, engineers, science clubs, authors, artists, students, and commercial exhibitors. All of these “makers” come to Maker Faire to show what they have made and to share what they have learned.’ -MakerFaire.com

-A family friendly mix of Burning Man, DIY meetup, technology showcase and a county fair. Held every year at the San Mateo Event Center in May since 2011.

# Faire Layout



Zone1: Power Racing

Zone2: Make Live!, Make Electronics

Zone3: Dark Room

Zone4: Make: Show & Tell

Zone5: Cole Zero & Mentos Fountains, Travelling Spectacular, Drone Racing

Zone 6: Drone Combat

Zone 7: Center Stage, Maker Pro, Make-Education

Zone8: Hands-on Homegrown, Maker Square

Zone9: Soap Bubbles Hula hoops

Zone10: Young Makers, Creativity Lab

# The Zany



# Showtime!



# Electric Wheels



# Drone Race

View from drone driver  
who uses goggle

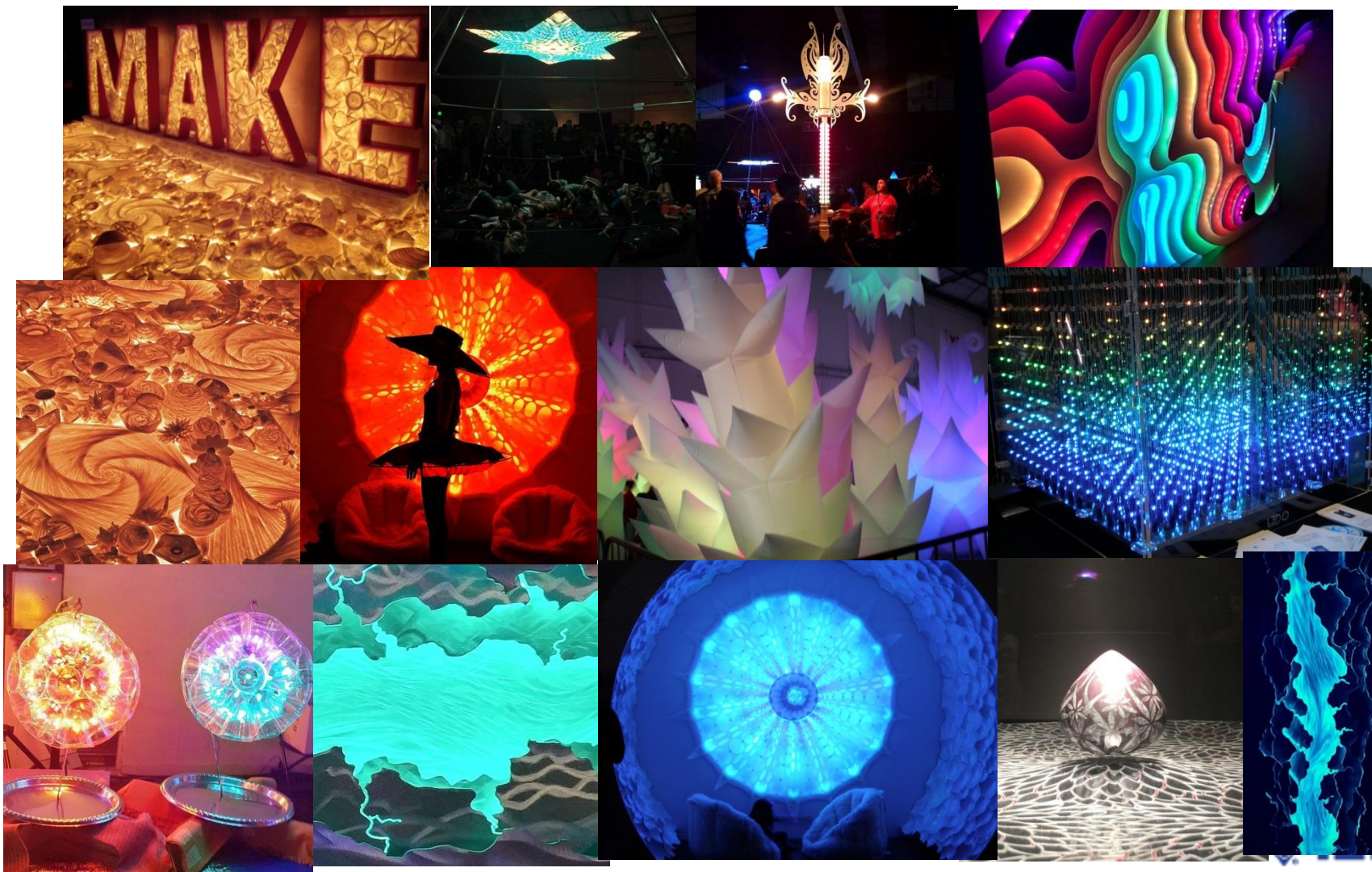


# Drone Battle -

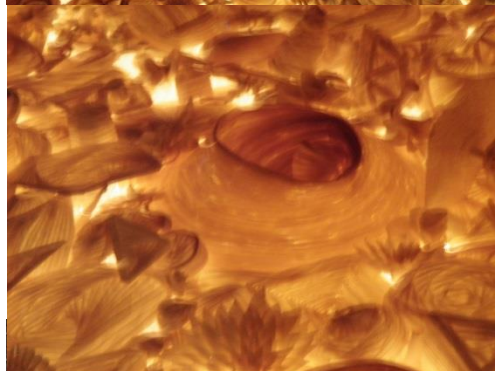




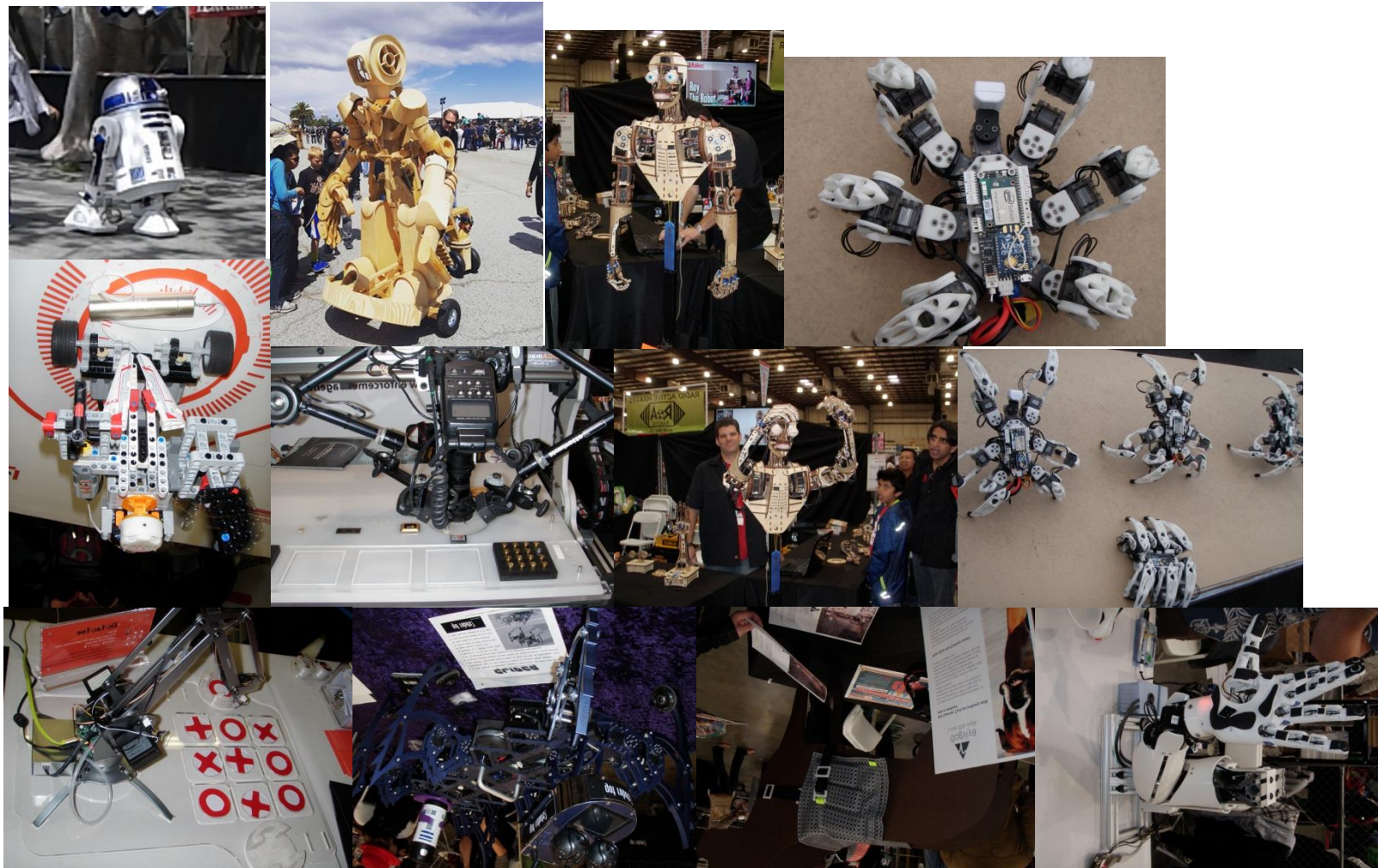
# The Light Show



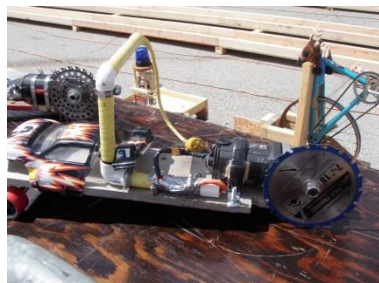
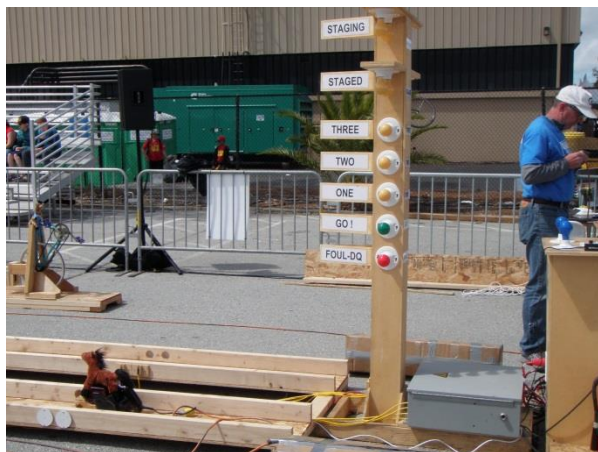
# Tape Art



# Robots Galore!



# Power Tool Drag Racing




# SJSU Elevated Transit Project



# Autonomous Solar Powered Kayak




**Hackerboat**



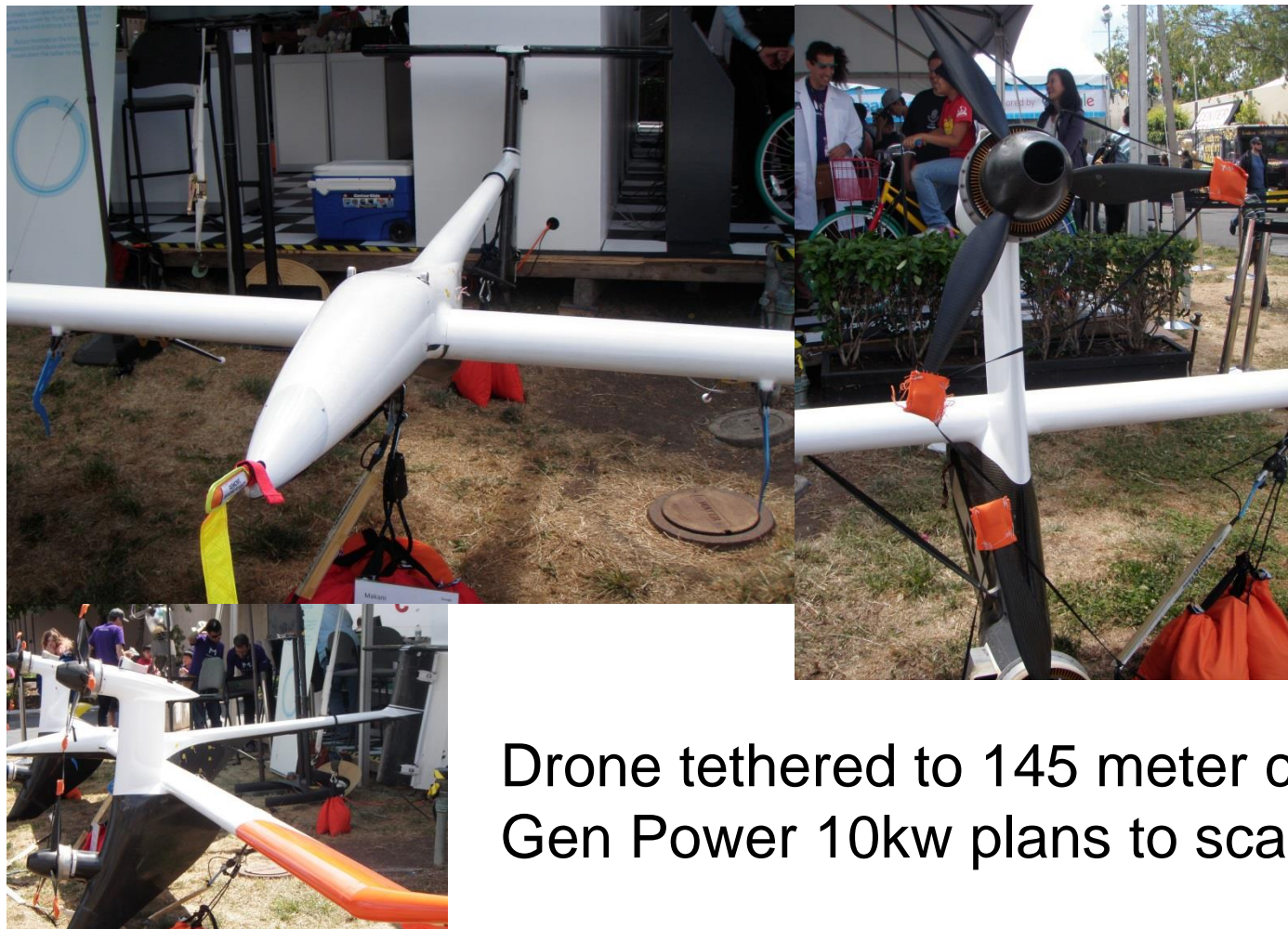
The Hackerboat project aims to build an autonomous boat capable of circumnavigating the globe. Our current test mule is giving us the confidence in our hardware and software to start designing longer range ocean going boats.

**Pierce Nichols**  
Pierce Nichols is the Principal Engineer of Los Angeles based Electromechanical LLC and the leader of the Hackerboat project.

Find us on  
<http://hackaday.io/project/8522-hackerboat>



# Google Wind Power Project Makani



Drone tethered to 145 meter cable  
Gen Power 10kw plans to scale to 600KW

# Livermore Labs Show case

**SMART WINDOWS**

Glass that Responds to Weather and Whims

Smart windows adapt to the outside environment to eliminate glare and maximize daylight. They also adjust the solar heat load through the glass to reduce the energy used to heat or cool a space. Personalized control options further boost occupants' comfort levels.



*The sample electrochromic window has been provided by VIEW, an industry partner of Lawrence Berkeley National Laboratory.*




**ALGAE POWER**

Alternative fuels come from processed feedstocks such as corn, switchgrass, vegetable oil...and algae. But it takes a lot of algae to make fuel.

Sandia National Laboratory's photobioreactor supplies carbon dioxide, nutrients and artificial light to grow oil-rich microalgae more efficiently and rapidly than in the wild.

**SMART SHADES**

Optimizing Energy Use for Heating and Cooling

Up to 20% of energy used to keep homes comfortable is lost through windows. What if that energy could be saved?

This fully automated window with sensors, multiple layers of glass, and a motorized shade optimizes solar load into the home to save energy whether the space is being heated or air conditioned.

*The display is part of a collaborative research partnership between Lawrence Berkeley National Laboratory and Pella Windows.*



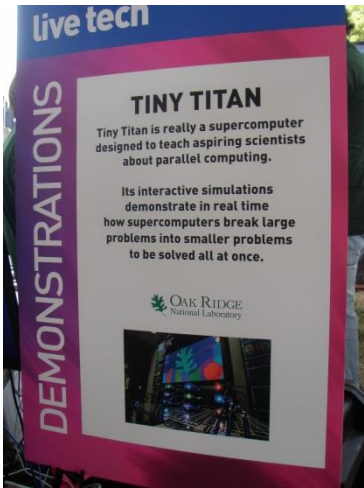


Inside Temp : 67.12 F  
 Outside Temp : 66.79 F  
 Heat Flow : -0.44 W/m2  
 Occupied : Yes  
 \*\*Demo mode\*\*






# Livermore Labs Show case



Parallel Processors

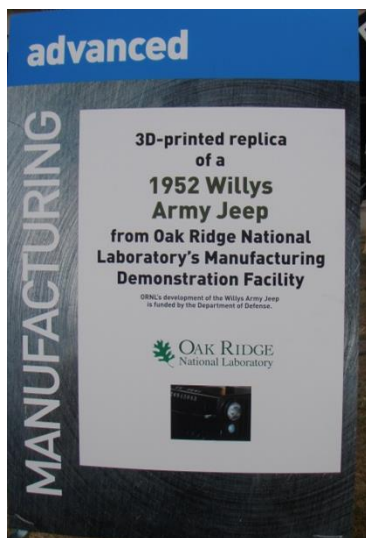


X Rays Detector

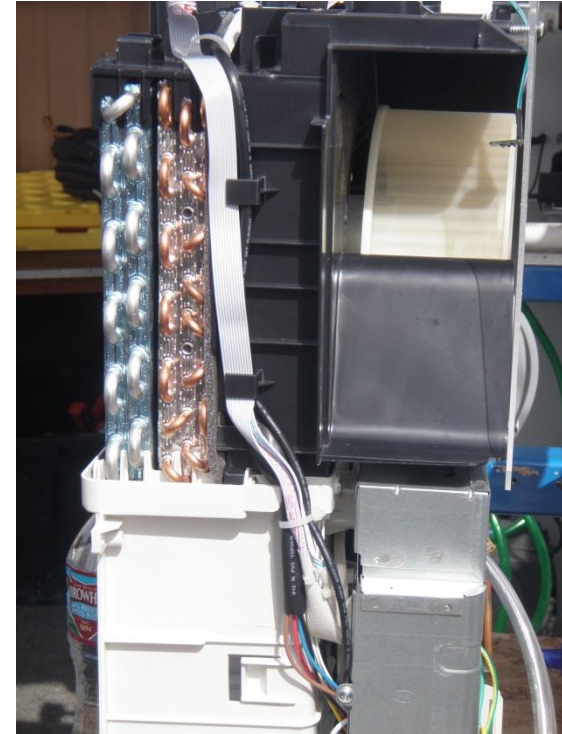
Gamma Rays Detector



# 3D Printed Full Scale Jeep



# Water Generation from Air



**Maker Faire 11 BAY AREA**

**openAWG**

 **openAWG**

Learn how to make water from thin air! openAWG is an ambitious project that aims to help address the global water crisis by creating open source and modular technology for extracting water from thin air by using commonly available components.

**openAWG**  
openAWG is a project formed to tackle building, maintaining, and performing research on prototype atmospheric water generators.

1KWh/liter of H<sub>2</sub>O  
Minimum Humidity 40%

# Nascent Objects



Proprietary embedded interconnect in housing

Camera module with Intel Edison Processor for toy train

# Startup Show Case



Motion Control Thru Hand Gestures

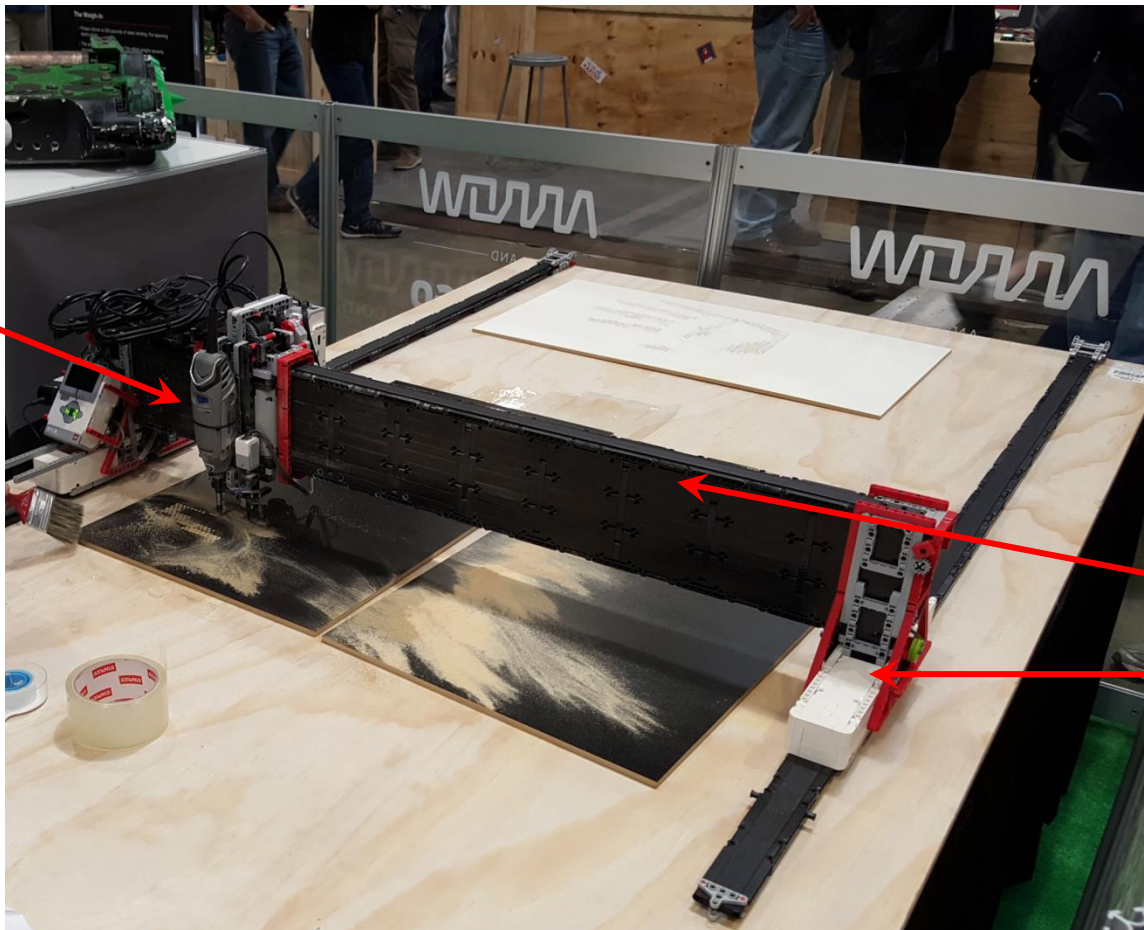


# FlipBook



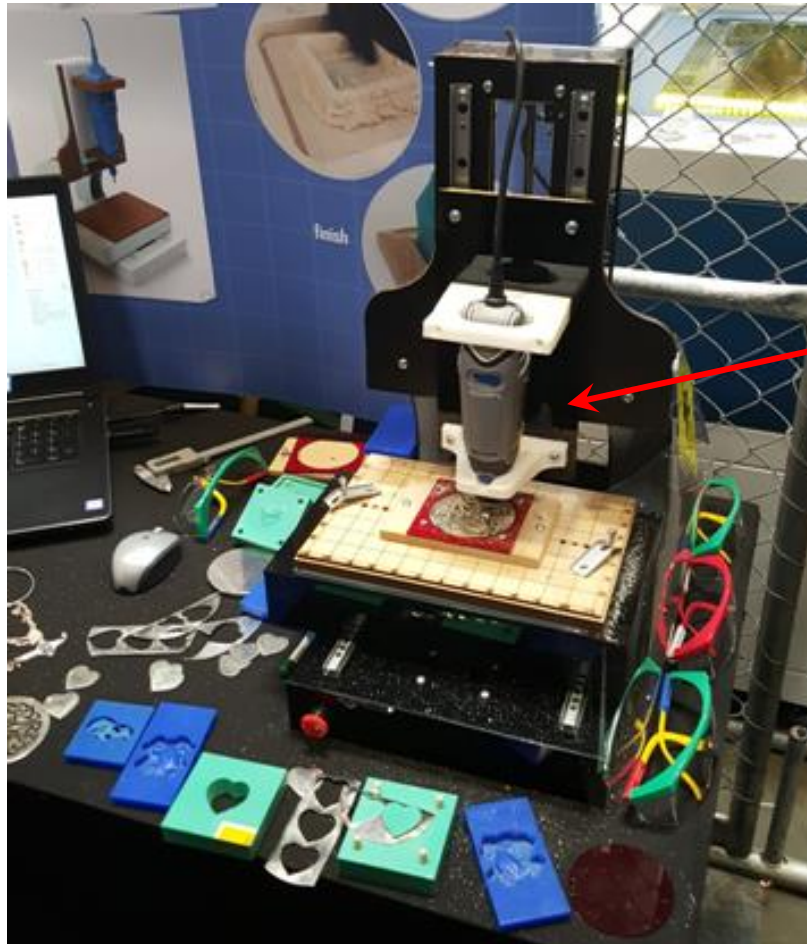
# CNC with Dremel & Lego by Arrow Electronics

Dremel



Lego

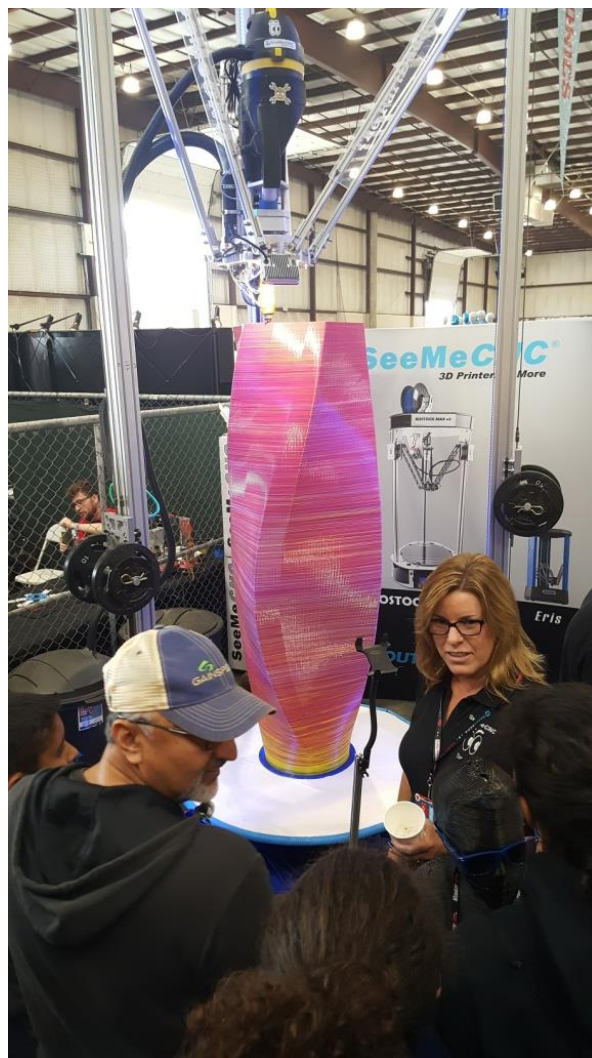
# CNC using dremel



Dremel



# Super-sized 3D printer from SeeMeCNC

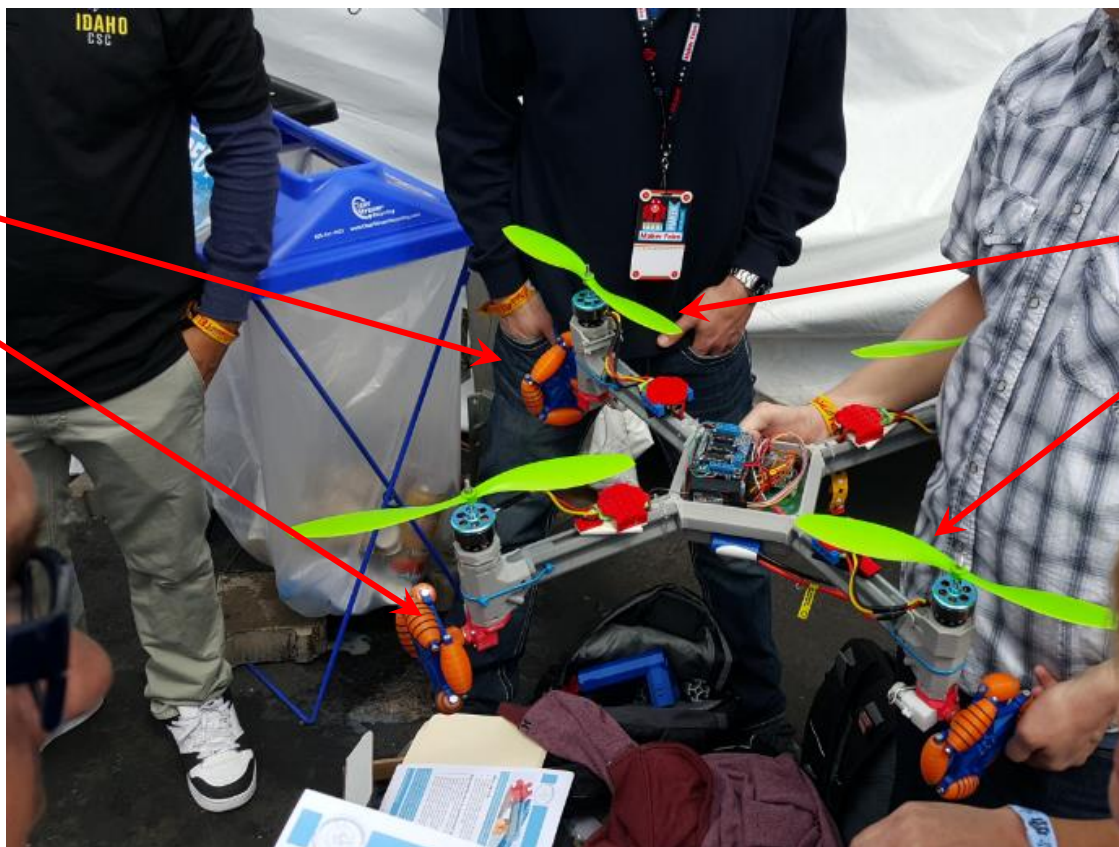


# Kniterate – 3D printer for Knitwear



# Flying Rover Drone – soon to be available on Kickstarter

Wheels



Blades

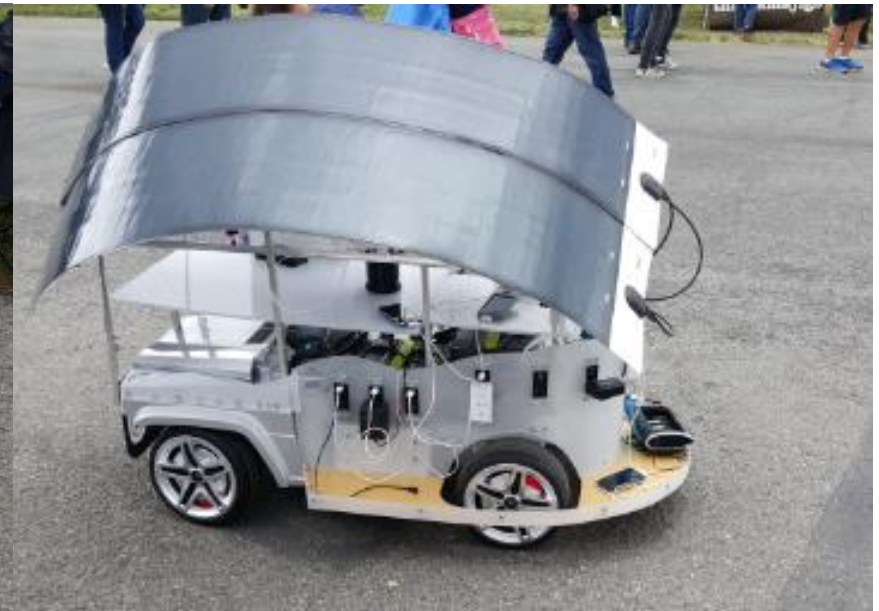
# Arcimoto Electric tri-cycle



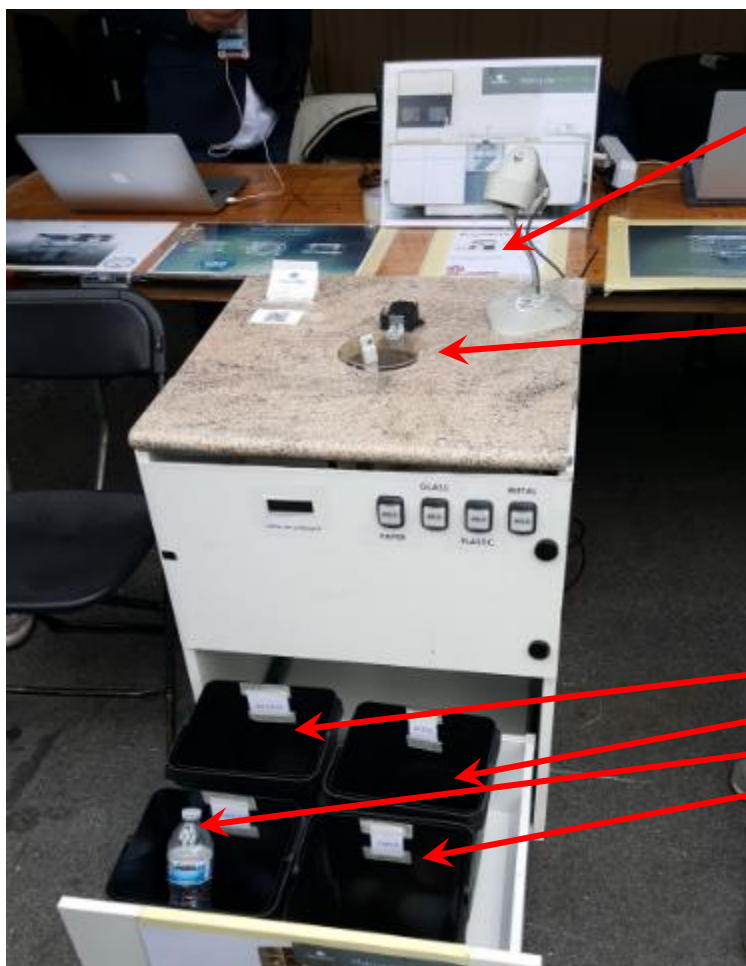
- 2 seaters
- 3 wheels
- rides like a motorcycle
- 70 miles on one charge
- street legal
- ~\$12k



# Mobile Solar Charger



# Auto Recycling Sorter



Barcode scanner

Opening

Compost, plastic, metal  
and waste bins

# Bicycle wheels that displays messages when spinning



# LED Piano



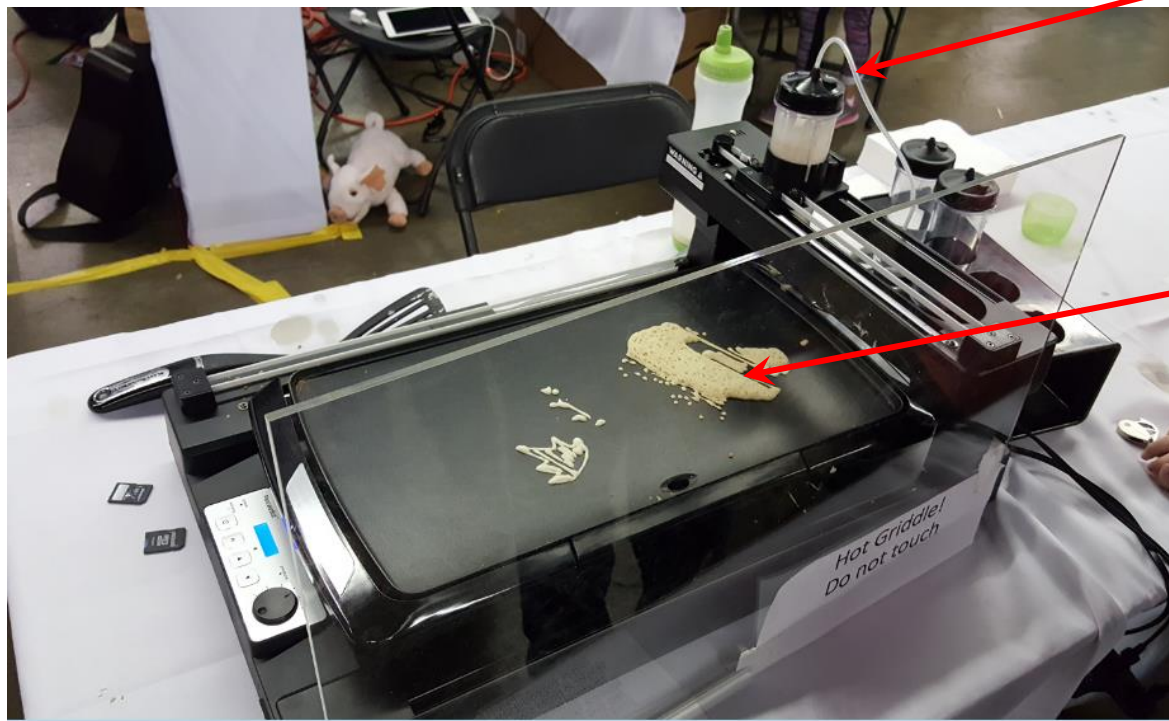


# Home-made LED Hand Bag



She made the LED handbag with programmable LED patterns

# 3D Printing Pancake Machine



Bottle with pancake batter

Can be programmed to print any pattern



# Touch Guitar



# Vibrating headset for helping vision impaired to sense objects



תודה  
Dankie Gracias  
Спасибо شكراً  
Merci Takk  
Köszönjük Terima kasih  
Grazie Dziękujemy Dékojame  
Ďakujeme Vielen Dank Paldies  
Kiitos Täname teid 谢谢  
**Thank You** Tak  
感謝您 Obrigado Teşekkür Ederiz  
감사합니다