

# AARON JACKENDOFF

Industrial Design  
RIT 2013



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# UNIVERSAL WOODEN TOY

Part 1 of 9

Meta Project  
Senior year  
20 week project

Project Brief: Design  
Universal Wooden Toy

Client/Sponsor: Areaware

## Users

Kids age 7+  
Adults who like wooden toys on their desks  
A gift from one adult to another

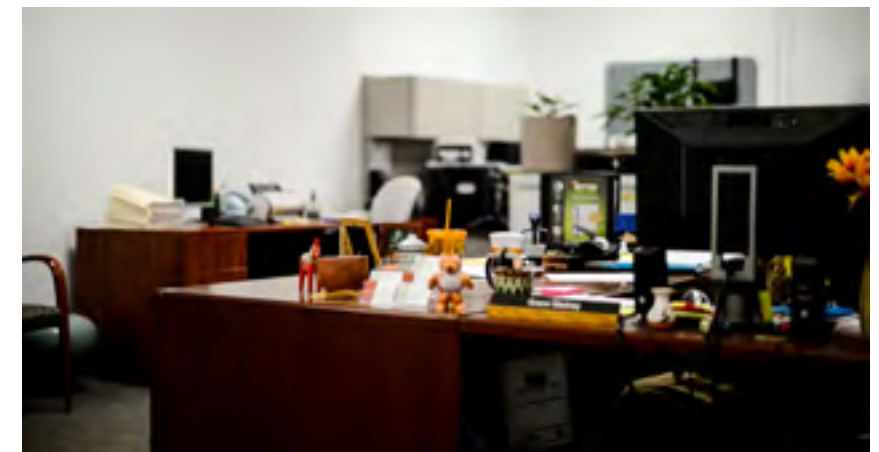
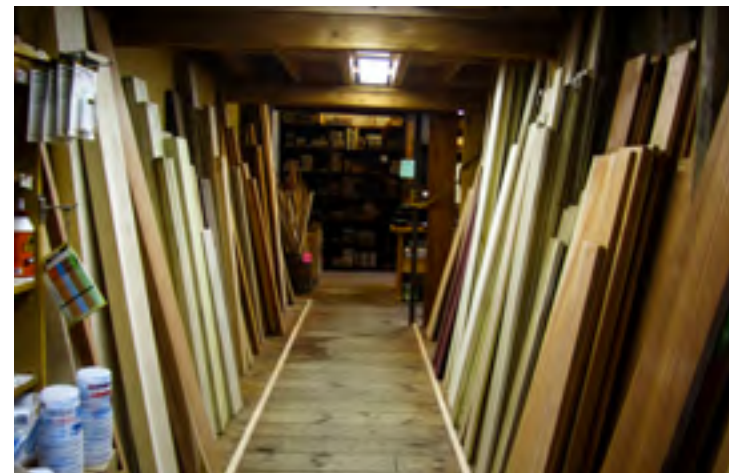
## Material

Wood

## Environment

Kitchen table  
Floor  
Business Desk

## Universal Toy Definition



Can be used by **young and old alike**.  
Utilizes one's **imagination**  
when **still** or in **movement**.  
Can interact **physically**  
and **mentally** with the user.

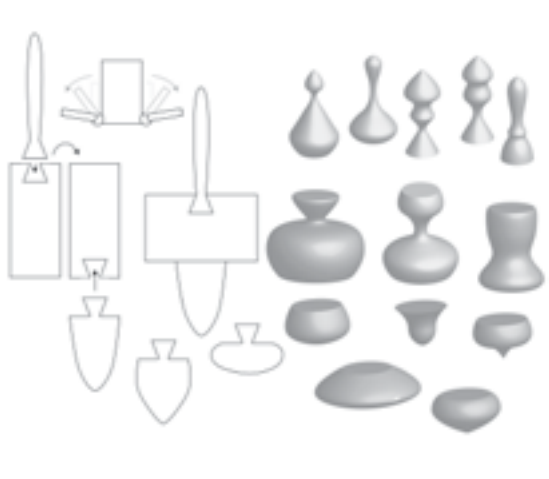
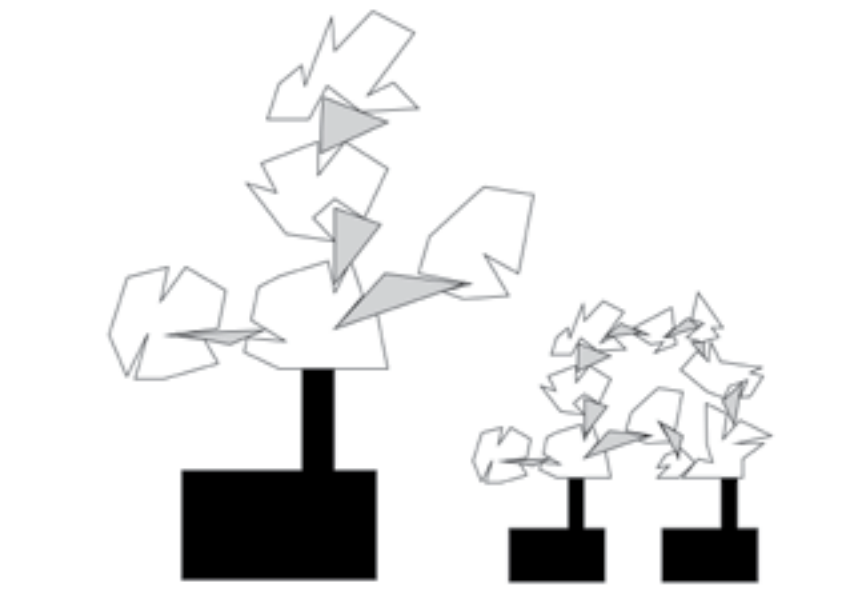
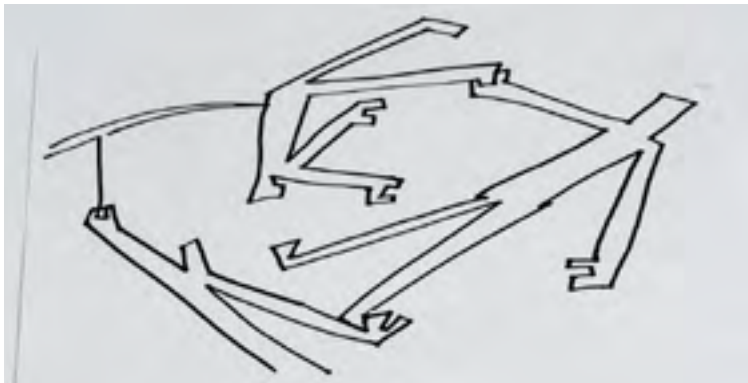


# UNIVERSAL WOODEN TOY

PART 2 OF 9

## INITIAL EXPLORATIONS

CONNECTING BLOCKS  
INTRIGUED ME.  
LOOKING AT IT I WAS REMINDED  
ME OF SMOKE STACKS.

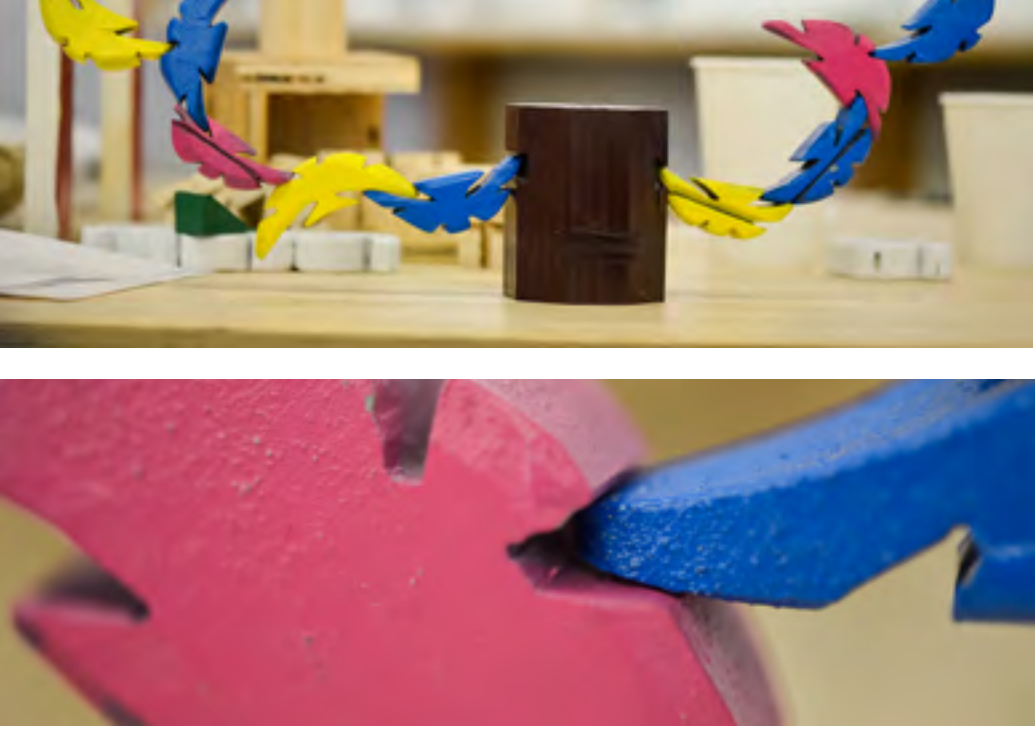




UNIVERSAL  
WOODEN TOY  
PART 3 OF 9

REFINEMENT

**SMOKESTACKS** TO CONNECTING  
IN 3 DIMENSIONS.  
FORM BECAME **CLOUDS**.  
CLOUDS TO **BIRDS**.





# UNIVERSAL WOODEN TOY

PART 4 OF 9

REFINEMENT

## Birds to Bees

Inspired by the  
shape of the  
housing unit.

Exploration through  
2D, 3D sketches in  
various materials.

Form factor  
between bees  
and hive.

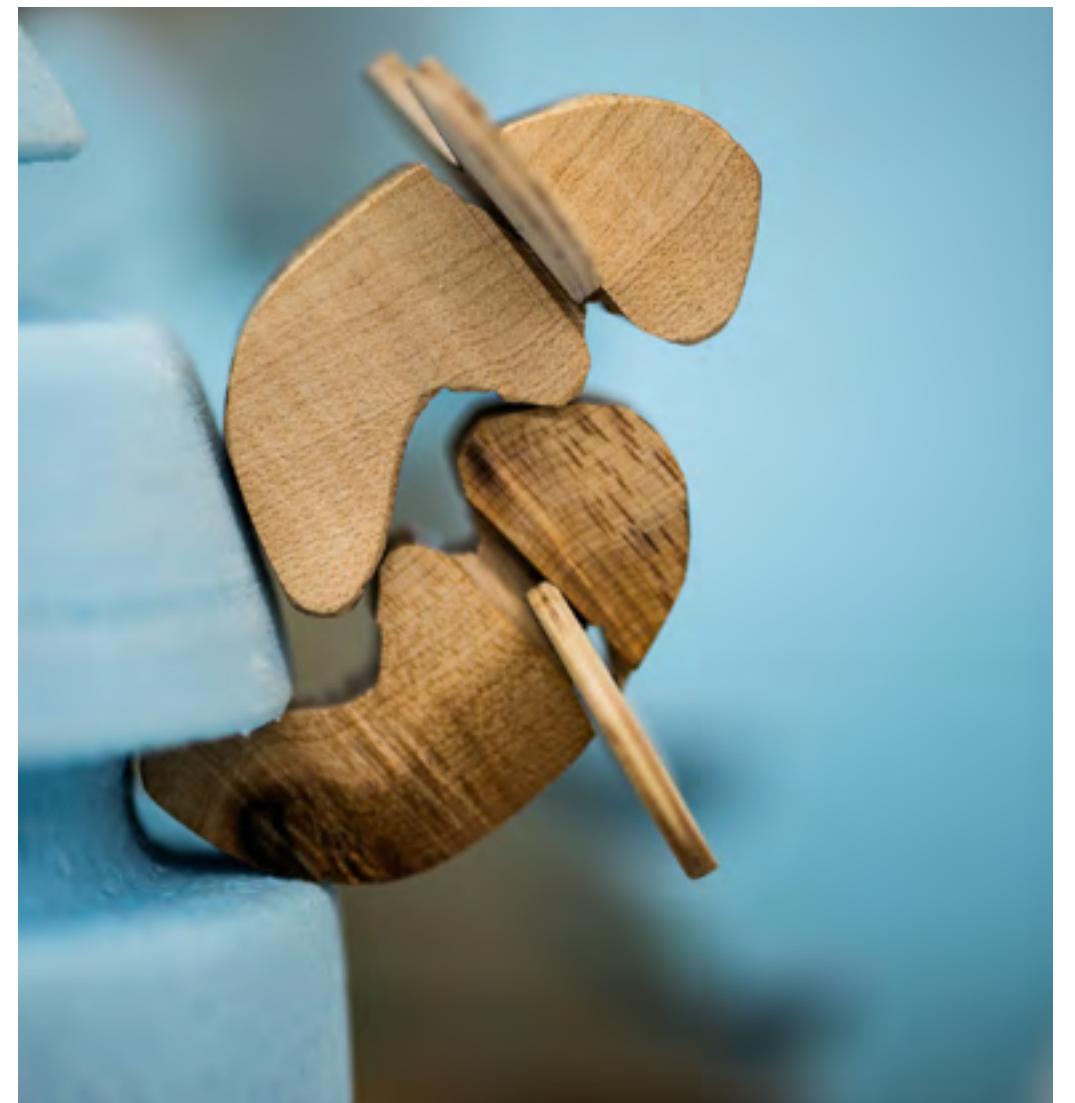




# UNIVERSAL WOODEN TOY

PART 5 OF 9

REFINEMENT

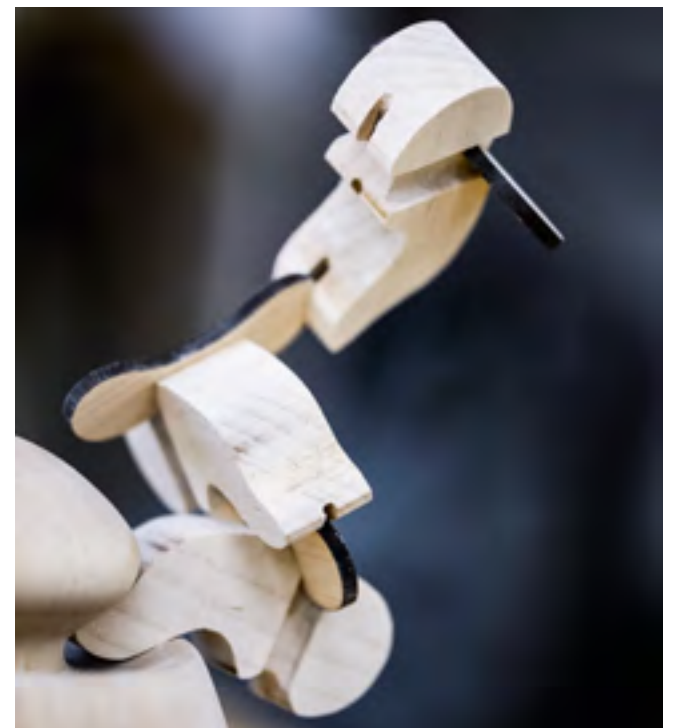
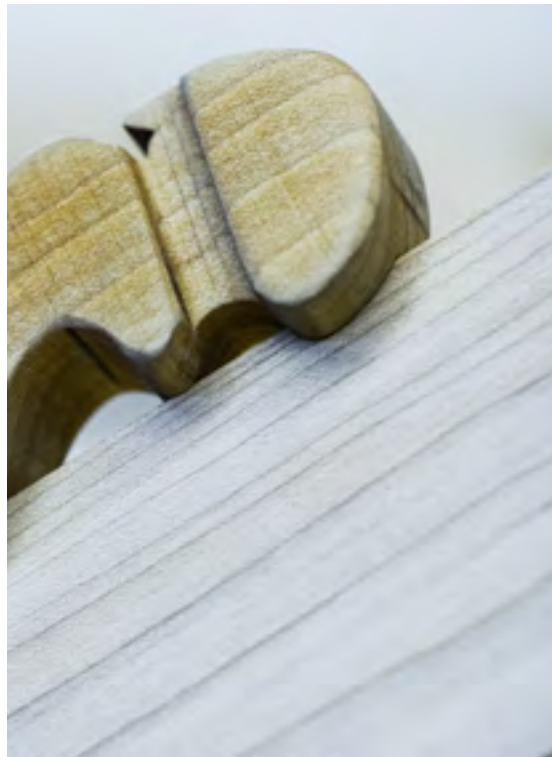




# UNIVERSAL WOODEN TOY

PART 6 OF 9

REFINEMENT



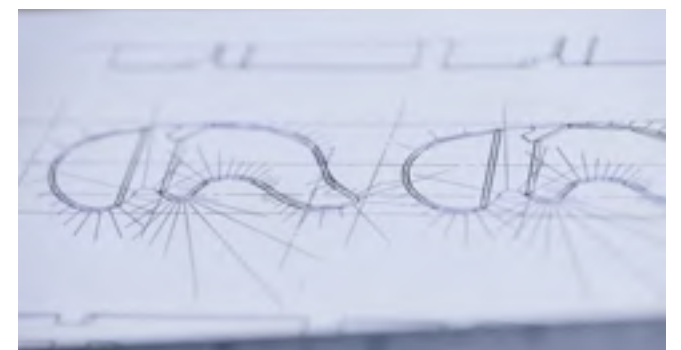
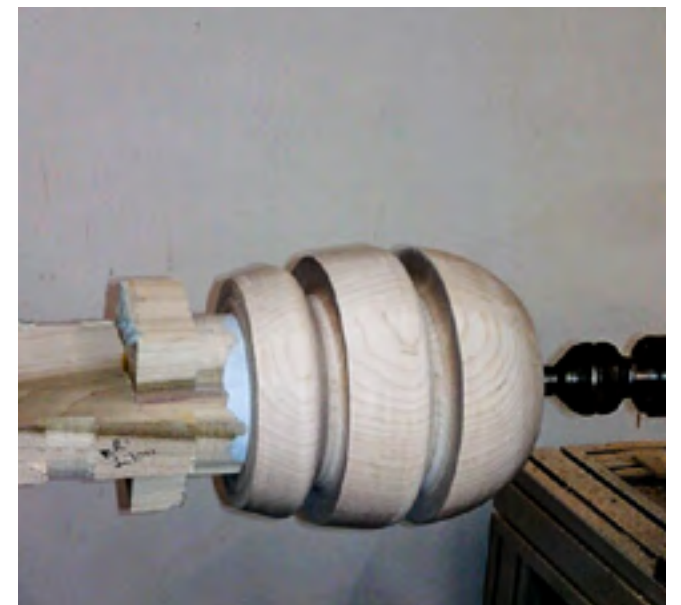
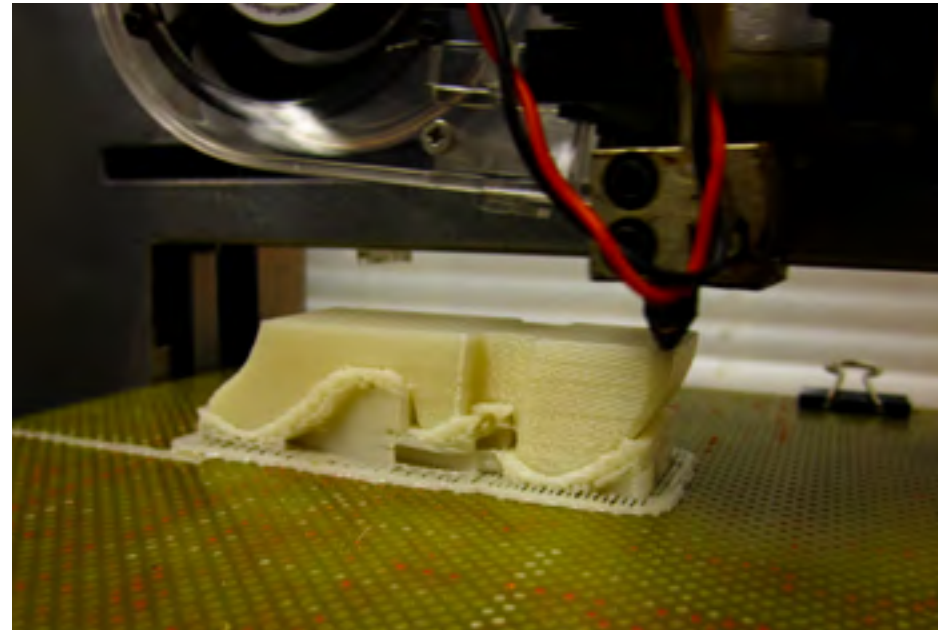


# UNIVERSAL WOODEN TOY

PART 7 OF 9

## GETTING IT DONE

Processes include  
**Laser Cutting**  
**3D Printing**  
**CNC Lathing**





# UNIVERSAL WOODEN TOY

PART 8 OF 9

EXPLANATION

## Problem

To create a universal toy primarily **fabricated from wood**.

## Context

**BeeKeeper** provides for contemplative meditation through the sight and feel of the exquisitely carved wooden hive and the bees. **Inspired by** both the traditional **“skeps”** (baskets made specifically to hold bees and their honeycomb) as well as by the archetypal image of a natural beehive.

## Solution

BeeKeeper is a wooden prototypical beehive, with wooden bees that can either be **hung** off it, **“flown”** by hand, or **stored** inside. Its design is minimalist, yet conjures images of the complex society of a beehive. Its simplicity provides minimalist beauty.

## Brand Strategy

BeeKeeper can be marketed through several avenues: Purveyors of high quality honey products, such as boutique specialty food stores; Vendors of supplies and journals for apiarists (actual beekeepers); Museum shops in horticultural conservatories and formal gardens; Online shops of organizations that promote ecology and “green” causes; Museum shops in natural history museums and zoos; and, Museum shops in art museums, especially those that have large collections of modern and/or minimalist art. By stating that a **portion of the purchase price** will be donated to the **fight** against **Colony Collapse Disorder (CCD)**, the company will also be targeting these buyers’ proclivity towards supporting causes that protect nature.





# UNIVERSAL WOODEN TOY

FINAL PROTOTYPE  
MAPLE





MARTINI

PART 1 OF 2

ICEBREAKER/MULTIMEDIA STATION

EQUIPMENT DESIGN

JUNIOR YEAR

2 WEEK

ELECTROSTATIC SPEAKER

DESIGN BRIEF

INNOVATIVE PIECE OF

EQUIPMENT BASED

ON USERS, A TECHNOLOGY,

AND ENVIRONMENT.

Users

25-40 year old

Tech-savvy

Hosts parties

No children

Have roommates/house mates

Technologies

Flat, Flexible Loudspeaker

A thin laminate made of layers of conducting and insulating material that resonates when electricity passes through

Corning Lotus Glass

A new high-performance display glass developed to enable cutting-edge technologies: OLED (organic light emitting diode)

Environment

Apartment / House

Parties

Living Room

Hallway

Office

Meetings

Conference Room





# MARTINI

## FINAL

ICEBREAKER/MULTIMEDIA STATION

THE “OLIVE” BECOMES A MICROPHONE AND PERSONAL VOICE RECORDER. THE MICROPHONE WIRELESSLY CONNECTS TO THE GLASS WHICH ACTS AS A MEDIA STORAGE DEVICE AS WELL AS A SPEAKER.

### Martini

form relaxes the atmosphere that Gen X and Y desire

### Touchscreen Interface

Located at the top

### Olive

/microphone is encased in a soft silicone padding

### Conference Calling

wirelessly connect with your phone/computer/tablet and allows a better conference experience

### Records

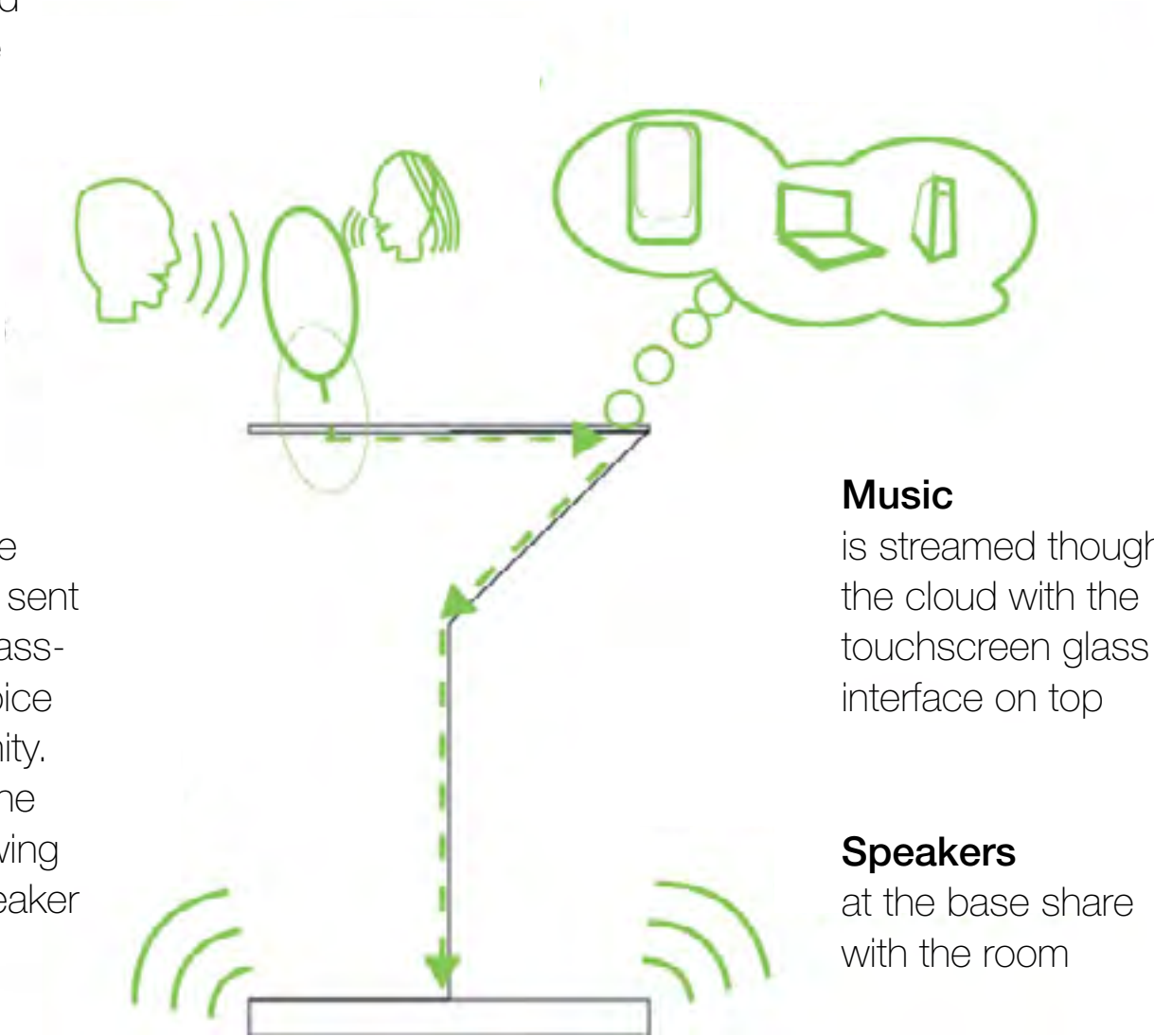
thoughts/secrets/jokes

### Stores

Voice recordings/music

### Game

At a party secrets/jokes are spoken into the Olive then sent wirelessly to the Martini Glass-stored-randomized with voice changers creating anonymity. The speakers will project the secrets into the room allowing the Martini to be the icebreaker



### Music

is streamed though the cloud with the touchscreen glass interface on top

### Speakers

at the base share with the room





# PAINT MIXER

## PART 1 OF 6

EQUIPMENT DESIGN  
JUNIOR YEAR

PROJECT BRIEF: DESIGN AN  
INNOVATIVE PIECE OF  
EQUIPMENT BASED  
ON **USERS, A TECHNOLOGY,  
AND ENVIRONMENT.**

### Design Brief

Design a small **paint and dye mixer**  
that efficiently **agitates** the mixture at high speeds.

Mixing by agitation, versus using blades,  
will reduce the chemical change and aeration  
which is detrimental to certain mixtures.

Certain metal-based paints need  
to be constantly agitated until used.

Paint and dye can be **measured** for mixing  
by either **weight and/or volume.**

### Benchmarking

Consumer measuring  
and mixing



Mixing other materials



Mixing paint in  
larger quantities



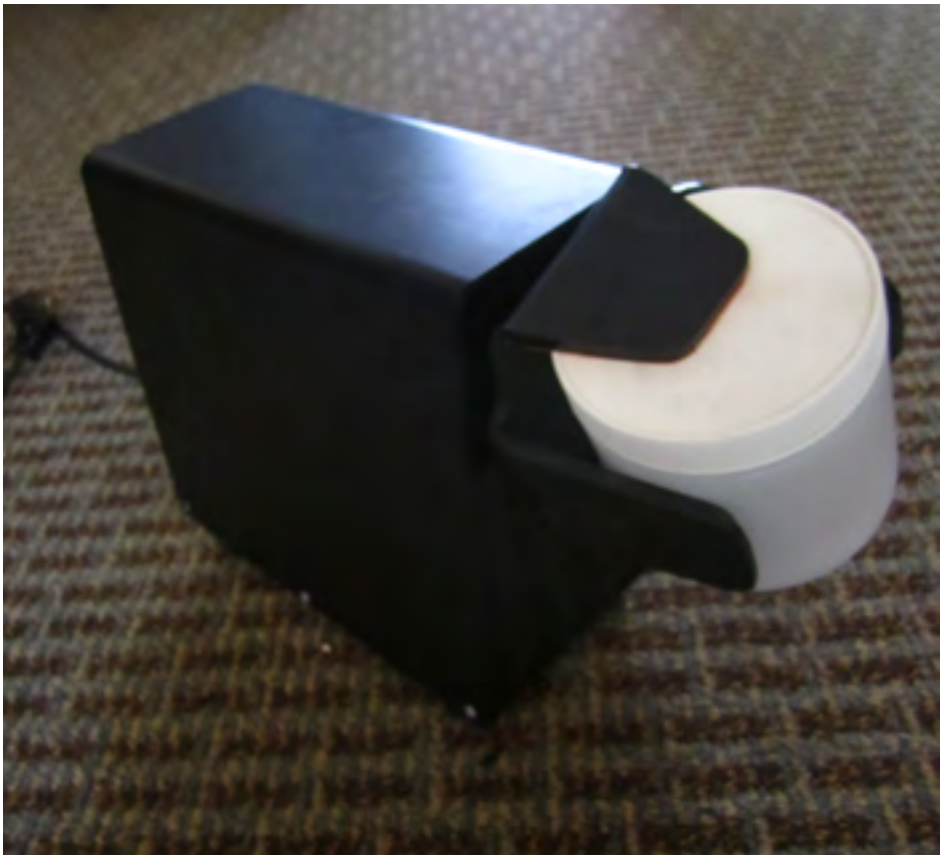
Dye mixing



Button and  
display  
ergonomics



### Given Technology



A **prototype** of a paint  
mixer **made by a friend.**

Mixes by **reciprocating**  
at **high velocities** rather  
than by using blades  
which introduce more  
aeration or change the  
chemical dilution of certain  
dyes.

This design **shakes** a  
lot. The new design has  
to **look and feel more  
stable.** The new design  
should also be safe.



# PAINT MIXER

PART 2 OF 6

## USERS

### Mike

Age	52
Gender	Male
Location	Rochester, NY
Occupation	University Professor
Income	\$70,000
Hobbies	DIY
Projects	Model Making Car Touch-ups Small Furniture Making Small Home Repairs

Lives in a semi-urban environment.  
Enjoys painting and is particular in his color mixing.  
Likes to make custom colors.  
Is willing to budget to make to make **DIY projects easier**.  
Does small **DIY** projects after work in his **spare time**.  
As he is **aging, mixing and doing repetitive tasks** with his wrists is **becoming more difficult**.  
Likes to do touch-up painting.



### Michelle

Age	33
Gender	Female
Location	Rochester, NY
Occupation	High School Teacher
Income	\$50,000
Hobbies	Fiber Arts
Projects	Dyeing fabric Making clothes and pillows Bleaching clothes

DIY Project Budget \$1,000 annually  
Lives in a semi-urban environment.  
Enjoys making clothes and is particular in her color mixing.  
Likes to make **custom colors**.  
Would like to **mix dyes more efficiently** in her **shared studio space**.

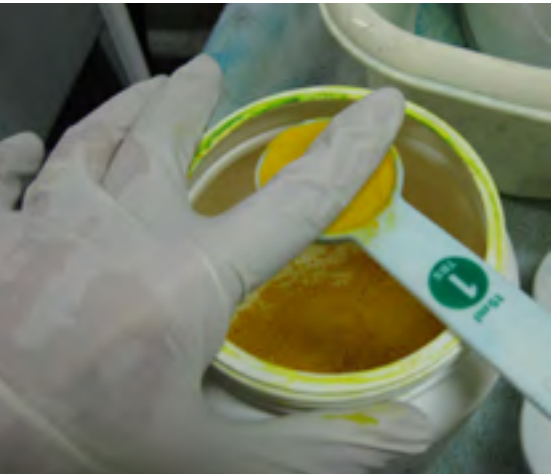
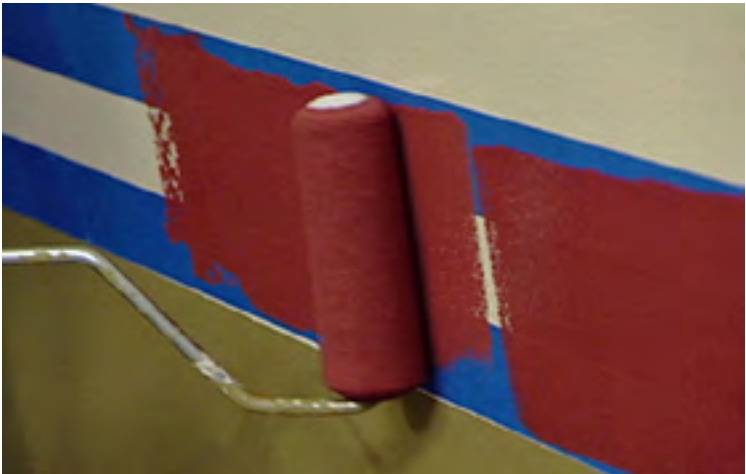




**PAINT MIXER**  
PART 3 OF 6  
Environment

DIY Paint Projects

Dye Mixing





**PAINT MIXER**  
PART 4 OF 6

3D SKETCHES

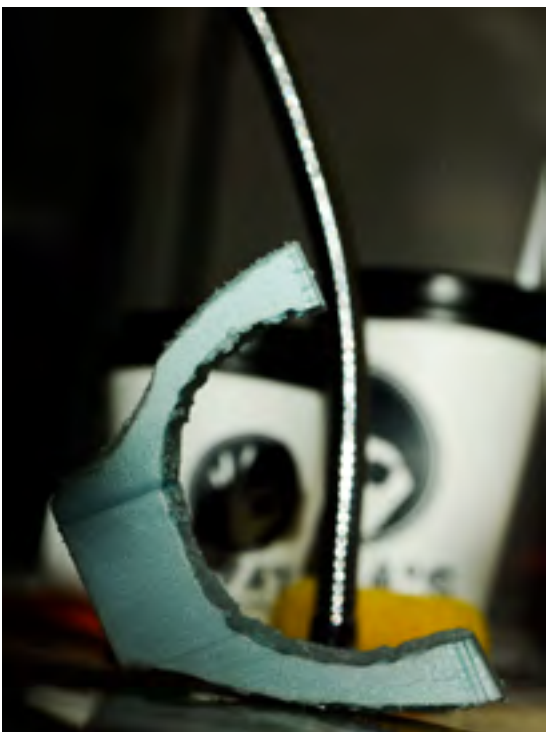
1st iteration



2nd iteration



Container and Holding Device



Together





PAINT MIXER

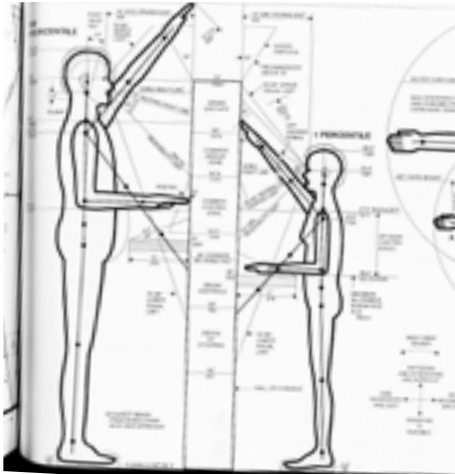
PART 5 OF 6

HUMAN FACTORS

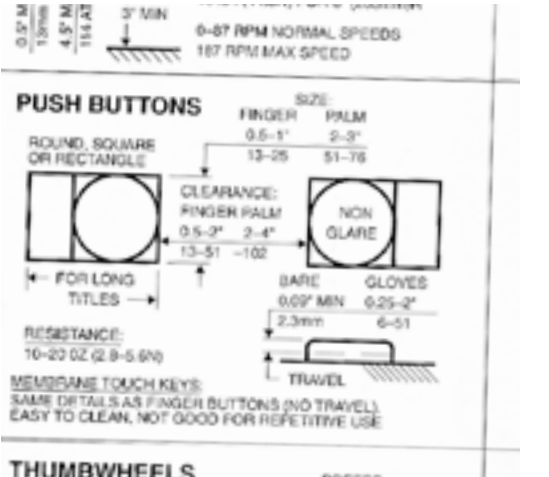
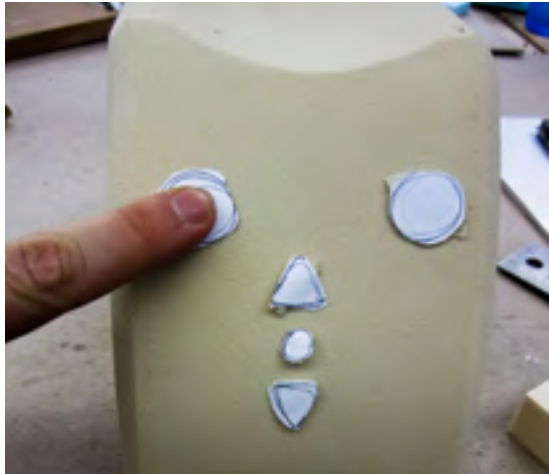
Container  
Ergonomics

Buttons

Viewing Angles



Measuring  
by weight





# PAINT MIXER

FINAL MODEL

FULL SCALE

18 INCHES TALL

YELLOW FOAM AND STYRENE





# EYE-LIGHT

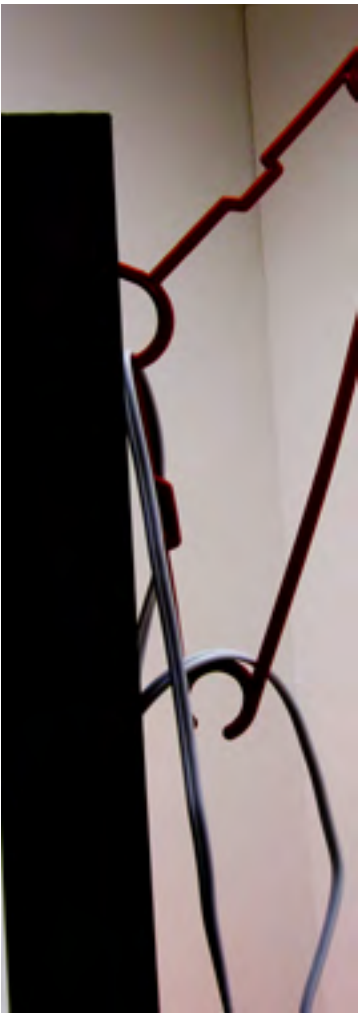
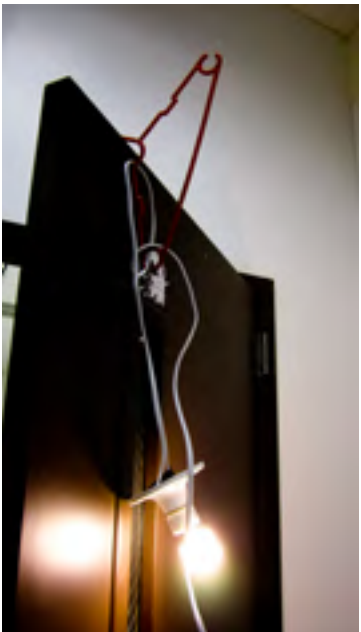
## PART 1 OF 3

PROJECT BRIEF: DESIGN A CFI  
LIGHT FIXTURE UTILIZING GIVEN  
COMPONENTS.

SOPHOMORE DESIGN STUDIO  
SOPHOMORE YEAR

RESPONSE: DESIGN A  
**HUMOROUS APPROACH TO  
PARENTAL SUPERVISION**

## PROCESS





# EYE-LIGHT

## PART 2 OF 3

When a **CHILD** HAS **MISBEHAVED** THEIR PARENT WILL SOMETIMES SAY “**I’M WATCHING YOU**” SO THAT THE CHILD WILL NOT ACT UP AGAIN.

When the light is **OFF**, IT LOOKS LIKE AN **ORDINARY HOUSE LAMP**, A PIECE OF DECORATION.





# EYE-LIGHT

## FINAL

HOWEVER, WHEN THE LIGHT TURNS ON (I.E. **THE PARENT BECOMES ANGRY**), THE PARENT WILL **HANG THE GLOWING LIGHT ON THE CHILD’S DOOR**, LEAVING THE PRESENCE OF THE PHRASE IN THE ROOM.

TO FURTHER PROVE THE POINT, THE **HANGING MECHANISM** ALLOWS THE PARENT TO HANG THE LAMP ON THE CHILD’S DOOR WHILE THE CHILD IS IN TIME-OUT. THIS **PREVENTS THE CHILD FROM CLOSING THEIR OWN DOOR**, AND ALLOWS THE PARENT TO CONTINUE TO WATCH.





PHOTOGRAPHER





# STEEL + PHOTOGRAPHY

WORK IN PROGRESS





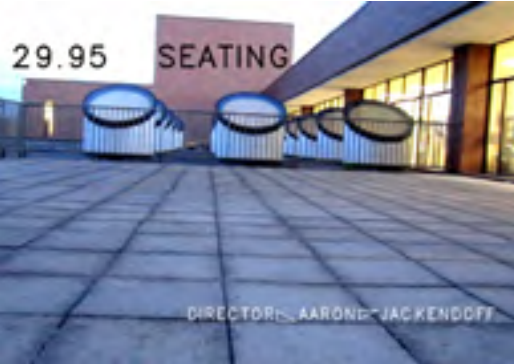
# DIY SEATING DEVICE

BUDGET \$29.95  
SPONSOR THE HOME DEPOT  
GROUP PROJECT

SOPHOMORE DESIGN STUDIO  
SOPHOMORE YEAR



Watch Usability Study on Vimeo  
<http://vimeo.com/23551347>  
(1 min)

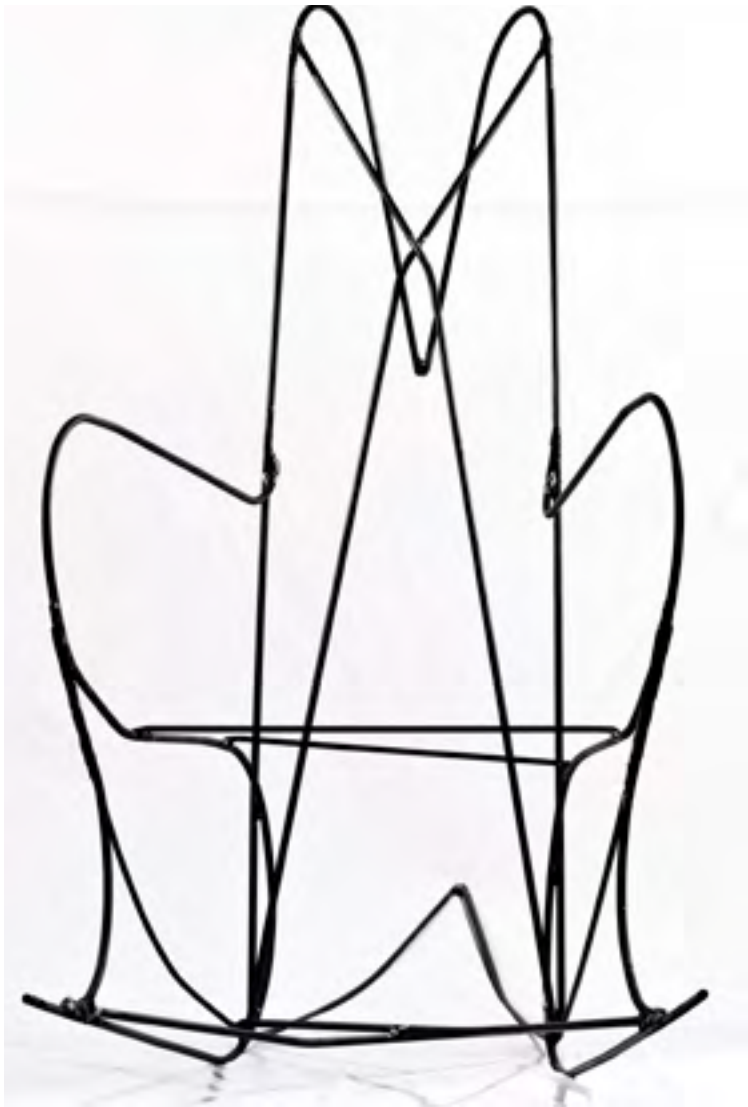




WELDING DESIGN  
PROJECT I  
SITTING AND ROCKING CHAIR  
FRAME

A CHAIR BASED ON EDWARD  
WESTON’S NUDES.

THIS CHAIR CAN BE USED AS A  
STILL CHAIR, AND THEN WHEN  
THE USER IS SO INCLINED MAY  
ROCK AND FURTHER RELAX.





# WELDING DESIGN

(WORK IN PROGRESS)

## PROJECT II, III, IV

### SWIVEL SIDE TABLE

MAY BE DISASSEMBLED INTO SEVERAL PARTS AND CAN FOLD OUT SO THE USER HAS MORE SPACE SIDE TABLE SPACE



### ROCKING CHAIR

THIS CHAIR IS COMPOSED OF BOTH RECTILINEAR AND CURVILINEAR PIECES. WHEN BOLTED TOGETHER THEY GIVE THE SITTER A SENSE OF EMPOWERMENT. THE ACTUAL SEAT WILL BE A STRETCHED FABRIC



### CHAIN CHAIR

ALTHOUGH THIS MAY LOOK LIKE A TORTURE CHAIR, ACCORDING TO MANY SITTERS IT IS SURPRISINGLY RELAXING. (PHOTO TAKEN IN THE WELDING STUDIO)





# THOUGHT@WORK

## PART 1 OF 3

### INDUSTRIAL DESIGN STUDENT CONFERENCE

OCTOBER 26-28, 2012  
SOPHOMORE - SENIOR YEAR  
**LEAD COORDINATOR**

**COMMUNITY, EMPATHY AND  
EMPOWERMENT THROUGH  
HEDONISTIC SUSTAINABILITY**



Built from the ground up, the only thing remaining was some name recognition from the 2003 and 2004 Thought at Work conferences.

**1 year 6 months of planning**

**3 day event**

**280 participants**

**8+ schools in attendance**, some driving over 8 hours including Syracuse University, Pratt, Cleveland Institute of Art and Humber College

**18 professional + 10 graduate speakers**

**3 Gallery Shows** (Alumni, Graduate and Innovation)

**2 concerts, 3 live bands**

**5 RIT clubs** involved: AIGA, New Media Club, GET, RIT Music Association and RIT Industrial Design Society of America student chapter

**RIT organizations** involved: Vignelli Center for Design Studies, RIT Alumni Association, RIT Innovation Center, RIT University Gallery, RIT Bevier Gallery

**Sponsors** Included: RIT, SUUID, Industrial Design Society of America, Core77, Raymond Corp, Keyshot, Moo.com

Events included: **28 workshops and lectures**; portfolio review award ceremony; render-off, design and drawing competitions, Vignelli center tours

**Food** 110 pounds of wings; cookout; bagels and coffee; tons of drinks, a catered lunch for speakers, after party with live music and food

Built a Team: **40 student workers**

Including: 2 co-coordinators, graphic designer, volunteer manager/team, web team, couch surfing coordinator, food coordinator, 3 photographers, 2 videographers, graduate team





# THOUGHT@WORK

PART 2 OF 3

## INDUSTRIAL DESIGN STUDENT CONFERENCE

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SOPHOMORE - SENIOR YEAR  
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# THOUGHT@WORK

## FINAL INDUSTRIAL DESIGN STUDENT CONFERENCE

OCTOBER 26-28, 2012  
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**COMMUNITY, EMPATHY AND  
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HEDONISTIC SUSTAINABILITY**



Lead Coordinator for Thought @ Work 2012, Industrial Design Student Conference

Projects included: Speaker Lead, Scheduling Lead, Information Flow Lead; Finance and Sponsorship Lead, **brought in over \$10,000**; Registration systems online and offline; Volunteer recruitment.

Lead of Web and Social Media: Built a small team of a developer, designer and content manager. Facebook grew to 240 likes, 3500 people reached/week and 160 people “talking about it”/week all within one year.

SEO: First actual website of Google, when searching for “Thought At Work”. We had to compete with The Roots.

Awards: IDSA chapter of the month  
(first student chapter to receive award)

Mentor for Thought@Work 2013  
Now with 40 active student members.