

COLLISION SIX, senses

Art Interactive

130 Bishop Allen Drive, Cambridge MA

Curated by jackbackrack, Dan Paluska, and Brian Knep

Exhibit: 10/30/04 - 11/07/04, 12-6pm

Opening Reception: Friday, 10/29/04, 6-9pm

Introduction

The Collision Collective and Art Interactive present *Collision Six, Senses*, an experimental exploration of art and technology. Collision Six, the sixth event in the Collision series, will showcase art from artists from MIT and beyond who use new technologies in their work. Eighteen pieces of art are presented by Stefan Agamanolis, Jessica Banks, Joelle Bitton, Nell Breyer, Andrew Brooks, Ben Dalton, Jeana Frost, jackbackrack, Brian Knep, Nick Knouf, Jeff Lieberman, Dan Maynes-Aminzade, Andrew Neumann, Amanda Parkes, Nancy Paterson, James Patten, Hayes Raffle, Ramesh Raskar, Dan Roe, Fran Trainor, and William Tremblay.

This show offers glimpses at the potential of technology based art. First, this artwork introduces novel ways to perceive our environment. Next it provides us with new perspectives on a future technology based society. Finally, technology based art suggests unique ways of acting on our environment.

In general, Collisions are a showcase of envelope-pushing artwork in an interactive workshop/laboratory format. The artwork often involves never before tried technologies, concepts and installation approaches. It is an opportunity for Collision colluders to experiment and show new ideas and techniques and to discuss their work with and gather feedback from the public. Artists will be available during the opening and weekends to speak with the public.

Exhibits

Curiously Strong (2004)

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Altoids boxes, solenoids, acrylic, copper
approx. 1" (h) x 4" (w) x 50' (l)

A string of actuated Altoids(TM) boxes is mechanically controlled so that the lids open and close in sequence. Because the piece is long and flexible, it can be configured to take advantage of (or interfere with) the natural organization of a room and can be experienced by many people at the same time - both visually and audibly. The falling of the lids and clicking of the solenoids creates a rhythmic, moving soundscape, enveloping the space like a Sisyphean loop of dominoes. Curiously Strong is funded in part by a Director's Grant from the Council for the Arts at MIT.

RAW (2003)

Joëlle Bitton, Stefan Agamanolis, Matthew Karau
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<http://www.medialabeurope.org/hc/raw>



Sound+still pictures+ISIS
Projection-based

(1) **Overview:** RAW is a system combining a tool and a process for capturing and conveying audiovisual impressions of everyday life. The tool itself incorporates a digital camera and a binaural audio recording device that captures the minute of sound before and after a picture is taken. The tool was used during a set of workshops in the African country of Mali, in August 2003 by 23 participants in Bamako, Timbuktu and Ségou.

(2) **Installation:** The installation presents the 23 RAW records authored by these participants. The material gathered with the tool “raw” and unedited all the way from production to archive to presentation; hence the name of the project.

(3) **Background:** The RAW project began with the realization that, for many reasons, we don’t always have a good sense of what everyday life is like in other places in the world, and that having this sense might be helpful in improving understanding and relations between people in different cultures. Records and accounts of everyday life in our pasts and presents are often mediated by numerous third parties. We feel this mediation degrades the full sense of awareness and appreciation we could achieve of other peoples and places, above cultural stereotypes and clichés. The goal of the RAW project is to develop a new kind of recording tool, together with a method for processing and presenting the material captured with the tool, that enables a more direct, minimally-mediated relationship between its user and the later audience, possibly in a far away place or time.

(4) **The RAW System:** RAW is a system combining a tool and a process for capturing and conveying audiovisual impressions of everyday life. The project aims to enable a relationship between the user of the tool and an audience in a different place or time with an absolute minimum of editorial mediation by a third party. The RAW tool consists of a digital still camera and a high quality digital stereo audio recorder that captures the minute of sound before and after a picture is taken. The relationship created between sound and im-

age forms a disjoint flow and opens a new field of audiovisual expression. These previously uncaptured moments in time can be kept as personal artefacts (diaries, journals), for cultural exchanges, for story-telling production or archived for later study. Audio is recorded binaurally using high-quality miniature microphones that are placed in the user’s ears. The apparatus strives for the closest possible recording of what the user of the tool is hearing while they are taking pictures. This design was chosen in an attempt to enable the later audience to immerse themselves “into the shoes” of the person who originated the content they are experiencing, and to place greater emphasis on the subjective point of view of this original source.

(5) **Mali:** We chose the African country of Mali as a starting point for thinking about the RAW project because we feel this country has a particularly rich and diverse culture that is not well recognized or understood within Western societies. We conducted a large scale workshop over three weeks in August 2003 in three locations in Mali: Bamako, Timbuktu, and Ségou; and worked with 23 people. The content gathered by these participants is presented in the interactive installation.

Walking Wall (2004)

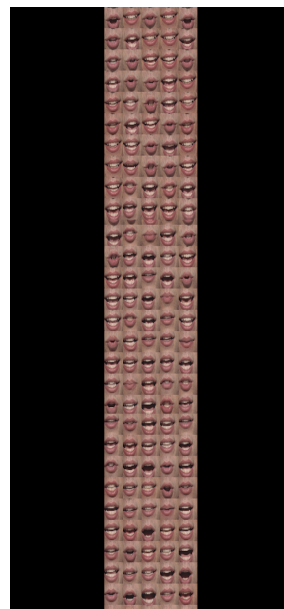
Nell Breyer, jackbackrack

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Projection, live video processing with Gooze
10’ x 4’ on wall and 10’ x 4’ on floor

A long corridor of black cloth for people to dance along, leads up to a wall of raining feet, eyes and hands. Feet patter along the wall through projections occurring in real

and slightly delayed time. Alongside the narrow corridor of black cloth is a white scroll for people to draw on, leave messages and marks on.

Funkenschnorkel (2004)

Andrew Zoz Brooks

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<http://mit.edu/mcanulty/www/>



Mixed media construction; audio output
15" (w) x 18" (l) x 39" (h) [when not being worn]

This backpack loudspeaker system, codename "Funkenschnorkel" (corrupted German, adapted from "broadcasting snorkel") is an apparatus for exploring the process and results of empowering the individual with control of the audio environment around them. It was inspired by protest demonstrations, which are in many ways paradoxical affairs: simultaneously celebrating and undermining the value of individual dissent; globally subversive yet often locally normative. A person equipped with a Funkenschnorkel is able to exploit such dichotomies using sound.

Sound is a primary way individuals make their physical presence felt, but the audio power of a single human is ill-matched to medium-to-large spaces or crowds. In most cases the individual must fall back on the group for a "critical mass" of people willing to join in. However, the feedback loop of group performance is reversed: people are more likely to join in if the critical mass is already present, and unlikely to add their voices if the basic groundswell is weak and ineffective. An individual with a mobile sound amplification system, therefore, can exert a disproportionate effect on a group or space. Furthermore, such a system equipped with a wide array of audio input files puts an interesting array of possible effects

within the reach of that individual. Crowd noises can be fed back in unorthodox fashions, and other audio effects used to create a virtual soundscape that does not match the physical reality. And of course pre-recorded music and the wearer's voice can be used for performances that would not otherwise be possible in a mobile, unsanctioned fashion.

The advent of portable digital audio mass storage devices and power-efficient class D amplifiers has made this type of device possible, and the Funkenschnorkel is an experimental realization of this. It is intended to be used in conjunction with an iPod for recorded input, allowing both pre-sequenced and dynamically chosen audio behaviour on the part of the wearer, and a microphone with spatial effects to allow the wearer to project his or her voice, or the voices of others. The visual design is practical as well as decorative - the snorkels help raise and disperse the sound out of the clutter of other humans, and the innards on display flaunt bodyworn electronics with pride in an age of hysteria over wearable bombs.

The Funkenschnorkel made its live protest debut at the Republican National Convention in New York City. Collision Six is its first static exhibition - here the activity of the wearer is simulated with a musical environment that responds to the movements of the audience. The compositional system was designed by Daniel E McAnulty and utilizes a short-range Sharp infra-red ranging sensor array designed by Blake Brasher. The audio design and response mapping is meant to demonstrate some of the possibilities of real-time adaptive music synthesis and to serve as a tribute to Paul Lansky's 1973 FM (frequency modulation) composition: "mild und leise."

Construction of the Funkenschnorkel was funded in part by a grant from the Council for the Arts at MIT.

Rabbit Field (2004)

Ben Dalton

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Satin, flannel, PC fans, electronics, Java

Approx. 15 x rabbits (Approx. 25 x 35 x 45 cm). A small ad-hoc herd.

Rabbit Field is an infestation of inflatable rabbit-like forms, filling their display space and inviting tactile interaction. They cover much of the floor, and any other available surfaces, growing in number each night. Each rabbit is self inflating using a simple computer fan, and can sense its internal pressure state by monitoring its fan speed. If a rabbit is squeezed, and partially deflated, the rabbits around it respond, as if out of empathy, deflating themselves. In this way, a wave of deflation ripples out from the squeezed centre. By connecting an entire field of forms into a network of sensors and output media, interactions between viewer and inflatable are further displayed and amplified as deflation data is passed from one rabbit to the next. The organic feel of the forms and the rhythm of their inflation and deflation in reaction to human touch are easily anthropomorphised by the audience as simple expressions of emotion. This initiates and encourages play and exploration. This piece seeks to encourage and reward a 'tangible dialogue' between viewer and inflatables, as well as hoping to establish social connection between viewers who co-interact with the system. Rabbit forms were chosen to engage and invite inquiry. These animals also have strong cultural connotations of fertility and innocence, and are prevalent images in modern eastern and western aesthetic. Use of the unique properties of inflatable structures in architecture, art and design has a long and creative history, flirting between chic design and tacky novelty.

Funded in part by a Director's Grant from the Council for the Arts at MIT.

Cables and Wires (2004)

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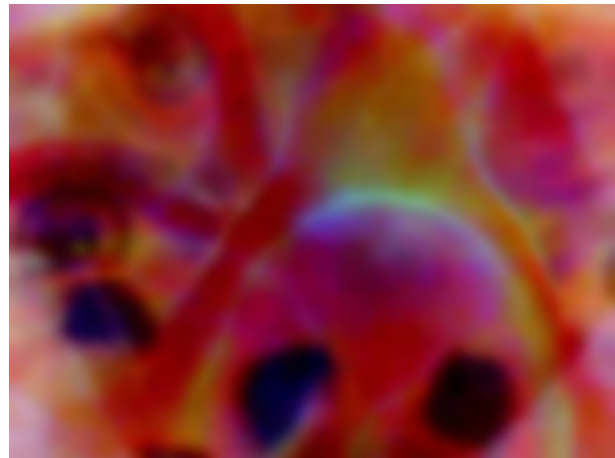
Mixed method woodcuts
Three pieces each 8" x 10"

Mixed method woodcuts. For these images, original dig-

ital photographs are first color separated. These images are then laser cut into wood. The woodblocks are further cut and manipulated by hand and then printed on paper.

Intimacy Machine (2004)

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Interactive video sculpture with one pc and two each of computer video cameras, lcd panels, two way mirrors, and boxes.

36" (w) x 18" (l) x 18" (h)

The intimacy machine is a reciprocal peepshow routed through a computer. It mediates intimacy allowing people to overcome their normal social boundaries. In particular it provides an indirect mechanism for people standing in close proximity to each other to stare at each other directly in the eyes, a feat that otherwise proves tremendously difficult for humans. Whereas telesex offers a way for people far away to feel close, the intimacy machine makes it possible for people that are close to feel distant. It also offers a facility for people to watch themselves watching. Finally, in other moments the machine reveals an ever changing intimate small world generated from macro images of self.

The artist would like to thank Dan Paluska, Mindy Zarem, Jeff Weber, Jessica Banks, Fran Trainor, Randall Heath, and Nell Breyer for their help in construction and otherwise.

Architectural Drip (2004)

Brian Knep
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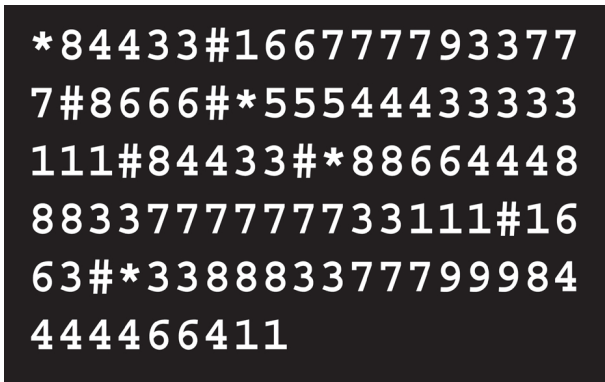


Computer, projector, camera
8'(h) x 2'(w)

An organic pattern grows and flows along one of the gallery pillars. The piece inhabits this structural element and becomes a living architectural detail.

44#444 (2004)

Nick Knouf
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<http://www.zeitkunst.org>



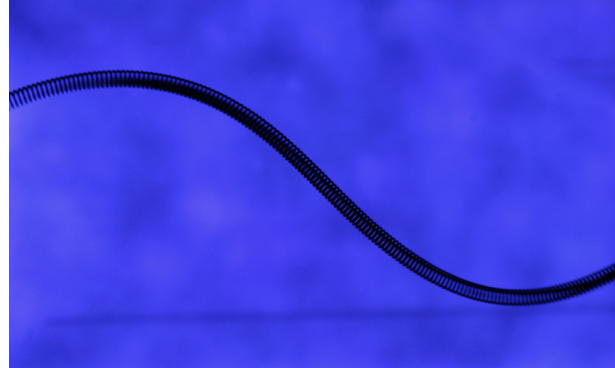
Dumb terminals, point-of-sale receipt printer, custom software.
100cm(h) x 50cm(w) x 50cm(l)

44#444 is an interactive installation that engages participants in a re-examination of modern methods of communication, namely cell-phone text messaging, by twisting representations into new forms.

Funded (in part) by a Director's Grant from the Council for the Arts at MIT.

Slink (2004)

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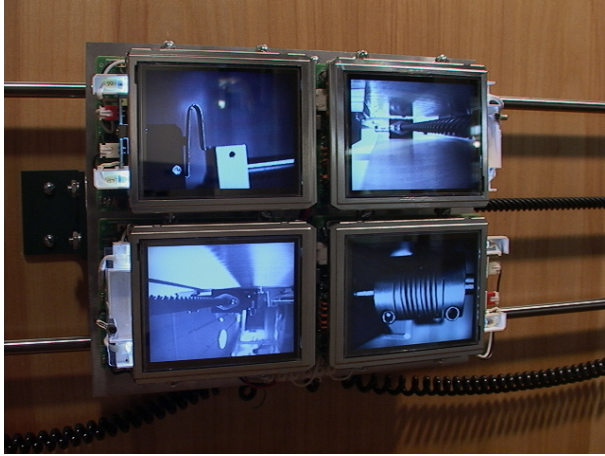
Aluminum, Corroded Steel, Acrylic, Electronics, Custom Voice Coil with Flexure Mounts, 1980 LEDs, Extension Spring.
5' x 20" x 6"

A voice coil vibrates linearly at roughly 50 Hz, at the resonance frequency of the flexure mounts on which it travels. This shakes an extension spring, tuned to match the voice coil frequency for one of its resonant modes. 12 banks of 165 LEDs each strobe behind the spring, through a translucent acrylic window, matching the vibrational frequency and running at roughly 1/10th the viewer to see the spring in a suspended/frozen state. Changing the relative phase between the 12 banks of LEDs creates a positioning system for each segment of the spring, which allows the spring to be broken into segments and seemingly moved independently of the physics governing the original vibration. Various effects are explored from this initial thought.

Many thanks to: Jack Holloway (hardware), Josh Glazer (software), Neil Jenkins (materials), and to jack-backrack, James Bales, Zoz Brooks, Arthur Ganson, Eric Gunther, Jessica Hinel, Dan Lovell, Kevin McKormick, Dinsha Mistree, Cha-Ling O'Connell, Dan Paluska, Derek van Beever, Dick Whitney, for soldering time, useful conversations, and inspirado.

Quartet (2003)

Andrew Neumann
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Wood, LCD screens, cameras, electronics
34" x 17" x 7"

A self-referencing wall panel, the surveillance cameras monitor the actions taking place within the piece, and report this information directly to the lcd screens for viewer approval . A completely analog production.....

STOCK MARKET SKIRT (2000)

Nancy Paterson

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<http://www.vacuumwoman.com>



Internet-Interactive
Approx. 8' x 4'

A blue taffeta and black velvet party dress is displayed on a dressmaker's mannequin or 'Judy,' located next to a computer and several monitors of varying sizes. In large type, the stock ticker symbol and price which is being

tracked, marches from right to left across the monitor screens as the stock price is continuously updated. Large white numbers and letters on a blue background (matching the blue of the taffeta skirt) scroll in simulation of the pixel board displays used to track stock values on traditional exchange room floor. PERL scripts (running under Linux) extract and analyze stock prices from online stock market quote pages on the internet. These values are sent to a program which determines whether to raise or lower the hemline via a stepper motor and a system of cables, weights and pulleys attached to the underside of the skirt. When the stock price rises, the hemline is raised; when the stock price falls, the hemline is lowered.

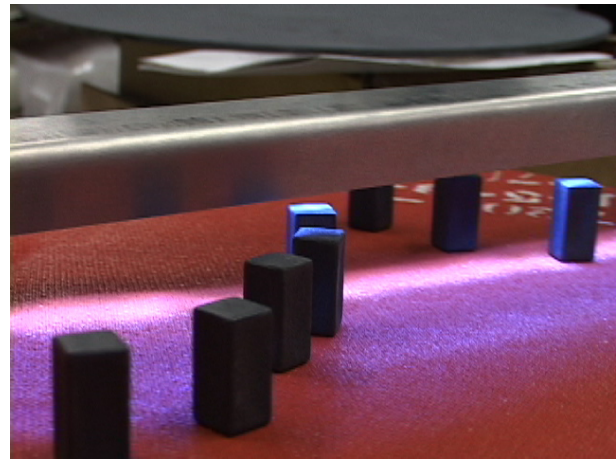
Three rotations (2004)

James Patten

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Steel, aluminum, wood, rubber, foam, motors, electronics, computers
3 podiums each measuring about 40" (h) x 24" (w) x 24" (l)

This piece explores three relationships between objects and sound. Three podiums each have a slowly rotating disk, and a scanner which looks at what is on each disk, and translates that into sound. The podiums are placed at the vertices of a triangle on the floor. Walking around this space, the viewer can experience the sound mixing in different ways. The viewer is encouraged to interact with each podium to change the sound it makes.

The first is a surface that is normally grey, but turns black when exposed to water. Visitors moisten a finger with a damp sponge, and then draw on the surface, in effect drawing a melody, which repeats several times, and then fades away.

The second podium has a layer of slow response foam, foam that holds its shape briefly after being squeezed. The visitor squeezes this foam, and the shape of the foam is converted directly into sound.

The third podium has a series of small objects, each of which creates a different sound when it moves under the scanner. Any objects that look different will have different sounds, and gallery visitors are encouraged to explore this space with whatever they may have brought to the exhibition in their pockets.

You're In Control (Urine Control) (2002)

Hayes Solos Raffle, Dan Maynes-Aminzade

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web.media.mit.edu/~hayes/mas863/urinecontrol.html



Urinal, electronics, PIC microcontroller, PC gaming equipment running custom video game
4' x 8' x 3'

The You're In Control system uses computation to enhance the act of urination. Sensors in the back of a urinal detect the position of a stream of urine, enabling people to play interactive games on a screen mounted above the urinal.

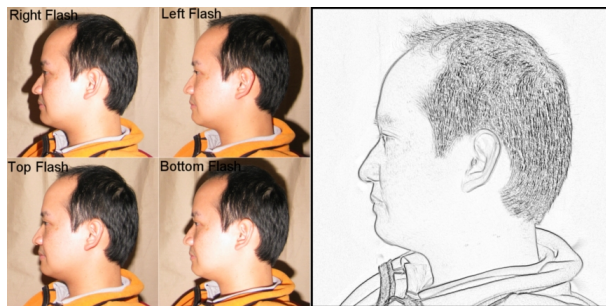
Camera Non-Photo (2004)

Ramesh Raskar, Amit Agrawal

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http://raskar.com



Multi Flash Camera + Projector + PC

10' x 10'

This is a multi-flash camera that can automatically generate stylized images and videos. Strategically positioned flashes around the camera cast shadows along silhouettes in different directions in the scene. A video camera triggers one of the four LED flashes for successive frames and the moving slivers of shadows are detected using a very simple image processing technique.

A flash to the left of a traditional camera creates an annoying sliver of shadow to the right of each silhouette (shape discontinuity) in the image. We add a flash on the right, which creates a sliver of shadow to the left of each silhouette. Then we add a flash to the top to create a shadow below each shape boundary and a flash at the bottom to cast shadows above each shape boundary. By simply observing the shadows and ignoring colors in the scene, we robustly find all the pixels corresponding to shape boundaries (depth discontinuities). This strikingly simple method finds depth edges while ignoring any edges due to color variation. A traditional image processing filter detects only the color edges. But shape edges are different from color edges. The human eye perceives geometric structure purely from the shape edges, a technique commonly used in cartoons and line illustrations. In the installation, without requiring 3D scanning or per-frame photo-editing, we depict the shape edges to create different 'non-photo' styles and the participant can observe his or her own non-photo rendering on the interactive display, a take on A-Ha's "take on me" line drawing animation video.

Specimen (2004)

Dan Roe

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Solar engines, steel

Approx. 19" x 19"

Specimen is simple synthetic organism of the variety stud-

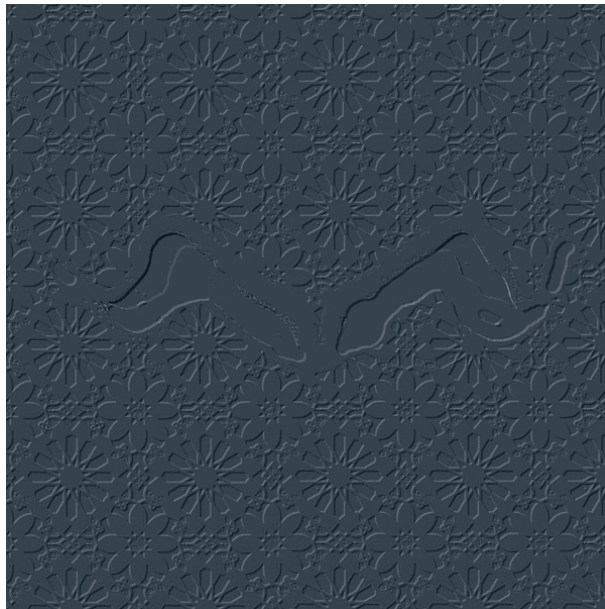
ied by Valentino Braitenberg in his book 'Vehicles: experiments in synthetic psychology.' It is constructed of steel and a solar engine (motors, solar panels, circuitry), and gets all its energy from the light hanging above the display.

Nine Cell Studies (2004)

Fran Trainor

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frantrainor@earthlink.net



Epson 2200 prints

Each print framed is 10" x 10", 36" x 36" sq. layout

A series of small studies exploring the relationship between cultural and biological production.

Bionic Log (2003)

William Tremblay

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Wood, steel, latex, electronics

Robot is 6'(l) x 3'(w) x 2'(h) and installation is 12'(l) x 8'(w) x 8'(h).

This is a small-human-sized wood and steel framed pneumatic robot of simple construction and virtually no brains. It also features a video projection of the natural environment the tree parts were found in. It writhes and evokes strong emotional responses from viewers. It is current on display in the Artbots show and is complete, tested, fixable and has not been shown in Boston except at the Allston Open Studios last year.