0 INTRO

Genomic Cartography: Chromosome 18. 2001
Ben Fry (American, born 1975)
Aesthetics + Computation Group (est. 1996),
MIT Media Laboratory (USA, est. 1980)
Processing software

Courtesy Ben Fry
Image by Ben Fry

Hektor spray-paint output device. Prototype. 2002-ongoing
Jürg Lehni (Swiss, born 1978)
Uli Franke (German, born 1978)
École cantonale d'art de Lausanne (écal) (Switzerland, est. 1821)
Stepper motor, toothed belts, aluminum casing, spray can, suitcase, custom-made electronics, and Scriptographer software

Lent by Jürg Lehni and Uli Franke

Expanding Helicoid. 1998
Chuck Hoberman (American, born 1956)
Hoberman Associates, Inc. (USA, est. 1990)
Anodized aluminum, stainless steel, and cable frame

Lent by Chuck Hoberman

01 NANO

Origami Compositions. 2002-07
Robert J. Lang (American, born 1961)
Grizzly Bear, opus 433: Korean Hanji paper; Bull Moose, opus 413: Korean Hanji paper; Fiddler Crab, opus 446: origamido paper; Snack Time, opus 527: Hiromi paper

Lent by Robert J. Lang

Origami Crease Patterns. 1998-2006
Robert J. Lang (American, born 1961)

Courtesy Robert J. Lang
Images by Robert J. Lang
Origami TreeMaker software. 1990-2006
Robert J. Lang (American, born 1961)
THINK Pascal, THINK Class Library, CodeWarrior, Xcode, and GCC software

Courtesy Robert J. Lang
Images by Robert J. Lang

Origami Simulation software. 1990-92
Robert J. Lang (American, born 1961)
THINK Pascal and THINK Class Library software

Courtesy Robert J. Lang
Images by Robert J. Lang

Origami models of the Fresnel lens for the Eyeglass Space Telescope. 1998-2005
Robert J. Lang (American, born 1961)
Roderick Hyde (American, born 1952),
Sham Dixit (American, born 1955), and
Arnie Heller (American, born 1948)
Lawrence Livermore National Laboratory (USA, est. 1952)
Watercolor paper

Lent by Robert J. Lang
Credit is given to the University of California, Lawrence Livermore National Laboratory, and the Department of Energy under whose auspices the work was performed, and Editor Arnie Heller

Computational Origami. 2003-07
Erik Demaine (American, born Canada 1981), and
Martin Demaine (American, born 1942)
Massachusetts Institute of Technology (USA, est. 1861)
Elephant hide paper

Lent by Erik Demaine and Martin Demaine

DNA origami. Models. 2004-05
Paul W. K. Rothemund (American, born 1972)
California Institute of Technology (USA, est. 1891)
Laser-etched glass

Courtesy Paul W. K. Rothemund
Micro-molded part from a deep-etched silicon mold. 2007  
**Philips Research Laboratories (The Netherlands, est. 1891)**  
**FEI Company (USA, est. 1971)**  
Polymer, 1,250x magnification on a FEI NovaNanoSEM600 microscope, horizontal field width: 250 micron

Courtesy Frans Holthuysen, Philips Research Laboratories, with assistance from FEI Company

Image by Frans Holthuysen

Titanium oxide crystallite during the deposition of a wet-chemical layer. 2002  
**Philips Research Laboratories (The Netherlands, est. 1891)**  
**FEI Company (USA, est. 1971)**  
2,500x magnification on a FEI scanning electron microscope, horizontal field width: 125 micron

Courtesy Frans Holthuysen, Philips Research Laboratories, with assistance from FEI Company

Image by Frans Holthuysen

Bad adhesion of metallization. 2007  
**Philips Research Laboratories (The Netherlands, est. 1891)**  
**FEI Company (USA, est. 1971)**  
Metal thin film on silicon, 40,000x magnification on a FEI NovaNanoSEM600 microscope, horizontal field width: 7.5 micron

Courtesy Frans Holthuysen, Philips Research Laboratories, with assistance from FEI Company

Image by Frans Holthuysen

Plasma etching done by SF6 plasma in the so-called Bosch process. 2006  
**Philips Research Laboratories (The Netherlands, est. 1891)**  
**FEI Company (USA, est. 1971)**  
Silicon, 20,000x magnification on a Philips XL40FEG microscope, horizontal field width: 24 µm

Courtesy Frans Holthuysen, Philips Research Laboratories, with assistance from FEI Company

Image by Frans Holthuysen
Rules of Six. 2007
Benjamin Aranda (American, born 1973),
Chris Lasch (American, born 1972),
Clay Coffey (American, born 1981),
Kamau Amu Patton (American, born 1972), and
Ron Rosenman (American, born 1975) of
Aranda/Lasch (USA, est. 2003)
Matthew L. Scullin (USA, born 1983) of
Department of Materials Science and Engineering, University of California
(USA, est. 1868) and
Lawrence Berkeley National Laboratory (USA, est. 1931)
Processing and Rhino3D software; panels: high-density foam and hydrocal
Manufactured by Situ Studio, USA (2008)
Commissioned by The Museum of Modern Art in occasion of the exhibition Design
and the Elastic Mind
Additional support by the Product-Architecture Lab at the Stevens Institute of
Technology

Microphotography: "nanotubes 2", 2007
Felice Frankel (American, born 1945), of
Harvard University (USA, est. 1636)
Nanotubes: 1 nanometer

Lent by Felice Frankel

Keith Schwab (American, born 1968), of
Department of Physics, Cornell University (USA, est. 1865)
Michael Roukes (American, born 1952), of
Department of Physics, California Institute of Technology (USA, est. 1891)
Nanofabricated from submicron-thin films of silicon nitride, gold, niobium, and
silicon oxide

Courtesy Keith Schwab, Department of Physics, Cornell University, and Michael
Roukes, Department of Physics, California Institute of Technology
Image by Keith Schwab
LithoParticle Dispersions: Colloidal Alphabet Soup. 2006
**Thomas G. Mason (American, born 1968), and**
**Carlos J. Hernandez (American, born 1979)**
Department of Chemistry and Biochemistry and the California NanoSystems Institute (est. 2000),
University of California, Los Angeles (USA, est. 1919)
Polymer microparticles containing fluorescent dyes and dispersed in water
Manufactured by University of California, Los Angeles, USA, est. 1919 (in conjunction with) (2006)
Colloidia LLC, USA (2006)
Courtesy Colloidia LLC
LithoParticle and Colloidia are trademarks of Colloidia LLC
Image by Thomas G. Mason and Carlos J. Hernandez

Typosperma. Concept. 2007
**Oded Ezer (Israeli, born 1972)**
Macromedia FreeHand and Rhino software

Courtesy Oded Ezer
Image by Amir Lipsicas

No Robots Please!. 2007
**Alan Outten (British, born 1966)**
Design Interactions Department (est. 1989),
Royal College of Art (UK, est. 1837)
The Apple Phone: Hannah Tobin (British, born 1998),
Roisin-Flora Culligan-Hughes (British, born 1998), and
Roisin Sheahan (British, born 1997)
Super-Human Mermaid: Gagandeep Chawla (British, born 1996),
Maddi Neye Swift (British, born 1996), and
Amara Hameed (British, born 1996)
Random Squiggle: Sophia Ivanetic (British, born 1996)
Shape Shifting Building: Jessica Wallace (British, born 1996), and
Mateusz Iwaniec (British, born 1998)

Courtesy Alan Outten
Images by Alan Outten

Clonable DNA Octahedron. 2004
**William M. Shih (American, born 1972)**
Biomolecular Nanotechnology Group (est. 2004),
Dana-Farber Cancer Research Institute (est. 1947),
Harvard Medical School (USA, est. 1782)
Plaster model generated on Z-Core 406 3D printer

Lent by William M. Shih, Harvard Medical School
Microphotography: "Charlie's nanowires", 2008
*Felice Frankel (American, born 1945), of Harvard University (USA, est. 1636)*
Nanowires: 2-4 nanometers

Lent by Felice Frankel

Snack Time, opus 5. 2007
*Robert J. Lang (American, born 1961)*
Hiromi paper

Lent by Gary Cornell

**01 NANO + 03 DESIGN FOR DEBATE**

The Flower from the Fossils from a Nanotech Future project. Model. 2006
*James King (British, born 1982)*
*Design Interactions Department (est. 1989), Royal College of Art (UK, est. 1837)*
Polyamide resin

Lent by James King

The Chalk from the Fossils from a Nanotech Future project. Model. 2006
*James King (British, born 1982)*
*Design Interactions Department (est. 1989), Royal College of Art (UK, est. 1837)*
Chalk

Lent by James King

The Comb from the Fossils from a Nanotech Future project. Model. 2006
*James King (British, born 1982)*
*Design Interactions Department (est. 1989), Royal College of Art (UK, est. 1837)*
Cardboard

Lent by James King

The Pattern from the Fossils from a Nanotech Future project. Model. 2006
*James King (British, born 1982)*
*Design Interactions Department (est. 1989), Royal College of Art (UK, est. 1837)*
Crushed chalk

Lent by James King
02 NATURE

Engine mount production component. 1998
Lothar Harzheim (German, born 1956)
Adam Opel GmbH (Germany, est. 1862)
Aluminum
Manufactured by Adam Opel GmbH, Germany, est. 1862 (1998)
Lent by Adam Opel GmbH

Institute of Bioengineering and Nanotechnology (Singapore, est. 2003)
Blue Beetle Design (Singapore, est. 2003)
Acrylic fuel cell cartridge, proprietary nanostructured catalyst-immobilized electrodes, polymer membrane, resistors, wires, and steel
Manufactured by Institute of Bioengineering and Nanotechnology, Singapore, est. 2003 (2006)
Lent by Institute of Bioengineering and Nanotechnology, Singapore

Institute of Bioengineering and Nanotechnology (Singapore, est. 2003)
Blue Beetle Design (Singapore, est. 2003)
Thermo-responsive hydrogel polymer in powder form, reagents, and polystyrene plastic
Manufactured by Institute of Bioengineering and Nanotechnology, Singapore, est. 2003 (2006)
Lent by Institute of Bioengineering and Nanotechnology, Singapore

Institute of Bioengineering and Nanotechnology (Singapore, est. 2003)
Blue Beetle Design (Singapore, est. 2003)
Glass slides etched with microchannels, glass slides coated with electrode metal layer and photosist film, yeast cells, acrylic plastic, and aluminum
Manufactured by Institute of Bioengineering and Nanotechnology, Singapore, est. 2003 (2006)
Lent by Institute of Bioengineering and Nanotechnology, Singapore

Bone Chair. 2006
Joris Laarman (Dutch, born 1979)
Aluminum
Lent by Friedman Benda
Image by Opel GmbH
Bone Chaise. 2006  
**Joris Laarman (Dutch, born 1979)**  
Clear UV-resistant polyurethane rubber  
Lent by Friedman Benda  
Image by Opel GmbH  

Splight table lamp. Prototype. 2005  
**matali crasset (French, born 1965)**  
Steel and glass  
Lent by matali crasset  

Materialecology. 2007  
**Neri Oxman (Israeli, born USA 1976)**  
**Massachusetts Institute of Technology (USA, est. 1861)**  
**Z Corporation (USA)**  
Subterrain: Coded FEA, Rhinoceros, and Generative Components software; CNC milled laminated oak and cherry wood  
Monocoque: Rhinoceros and Generative Components software; full cure digital materials Vero White and Tango Black, acrylic based photopolymers, and plaster resin composite  
Raycounting: Rhinoceros and Generative Components software; photo reactive liquid resin SL 7510 and nylon 12  
Cartesian Wax: Rhinoceros and Generative Components software; ultra low viscosity urethane rubber, semi rigid polyurethane casting resin composite, and machinable wax  
Lent by Neri Oxman  
Sponsored by MIT Design Lab and Computation Group, MIT Department of Architecture, and Director's Grant from the Council for the Arts at MIT  
Subterrain models sponsored by MIT  
Monocoque models sponsored by Objet Geometries, Inc., Z Corporation, and MIT  
Raycounting models sponsored by ARRK Product Development Group Ltd., Tangible Express, and MIT  
Cartesian Wax models sponsored by MIT  

Mercedes-Benz bionic car. Concept. 2005  
**Peter Pfeiffer (German, born 1943)**  
**Daimler AG / Mercedes-Benz Design (Germany, est. 1998/1926)**  
Lent by Daimler AG
Lily Impeller. Prototype. 1996
Jayden D. Harman (Australian, born 1949)
PAX Scientific, Inc. (USA, est. 1997)
Stainless steel
Manufactured by PAX Water Technologies, Inc., USA (2002)
Lent by PAX Scientific

Aqua_ray. Prototype. 2007
Rudolf Bannasch (German, born 1952), and
Leif Kniese (German, born 1968), of
EvoLogics GmbH (Germany, est. 2000)
Markus Fischer (German, born 1966), of
Festo AG & Co. KG Corporate Design (Germany, est. 1925)
Fiberglass-reinforced plastic, CURV polypropylene sheet, polyamide resin with elastane skin, and Torcman brushless motor
Prototype by EvoLogics GmbH, Germany, est. 2000
Lent by Festo AG & Co. KG

Airacuda. Prototype. 2006
Elias Maria Knubben (German, born 1975), and
Markus Fischer (German, born 1966), of
Festo AG & Co. KG Corporate Design (Germany, est. 1925)
Polyamide and silicone
Prototype by Festo AG & Co. KG Corporate Design, Germany, est. 1925
Lent by Festo AG & Co. KG

Air_ray. Prototype. 2007
Rainer Mugrauer (German, born 1968),
Günther Mugrauer (German, born 1959), and
Clemens Gebert (German, born 1963), of
Effekt-Technik GmbH (Germany, est. 1996)
Markus Fischer (German, born 1966), of
Festo AG & Co. KG Corporate Design (Germany, est. 1925)
Aluminum-vaporised PET foil, flapping-wing drive mechanism, and power supplies (1500 mAh LiPo accumulator cells)
Prototype by Effekt-Technik GmbH, Germany, est. 1996
Lent by Festo AG & Co. KG

SoftBot from the Biomimetic Soft-Bodied Robots project. Prototype. 2005-07
Barry A. Trimmer (British, born 1958)
Biomimetic Devices Laboratory (est. 2005),
Tufts University (USA, est. 1852)
Silicone elastomer and Nitinol shape-memory alloy
Lent by Dr. Barry A. Trimmer, Tufts University
GROW. Prototype. 2005-ongoing
Samuel Cabot Cochran (American, born 1982), and
Benjamin Wheeler Howes (American, born 1983)
SMIT Sustainably Minded Interactive Technology, LLC (USA, est. 2005)
Thin film photovoltaics, piezoelectric generators, screen printed conductive ink
encapsulated in ETFE fluoropolymer lamination, stainless steel, nylon, neoprene
rubber, copper wire, and aluminum

Lent by SMIT, Sustainably Minded Interactive Technology, LLC
Sponsored by the National Collegiate Inventors and Innovators Alliance (NCIIA)

Dressing the Meat of Tomorrow. Model. 2006
James King (British, born 1982)
Design Interactions Department (est. 1989),
Royal College of Art (UK, est. 1837)
Plastisol (fiberglass reinforced polyester)

Lent by James King

Biojewellery. Prototypes. 2003-07
Tobie Kerridge (British, born 1975),
Nikki Stott (British, born 1977), and
Ian Thompson (British, born 1975)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Hydroxyapatite, tricalcium phosphate, and silver
Prototypes by Nikki Stott, British, born 1977
Lent by Tobie Kerridge, Nikki Stott, and Ian Thompson

The Pig Wings Project. Prototypes. 2000-01
Oron Catts (Australian, born Finland 1967),
Ionat Zurr (Australian, born UK 1970), and
Guy Ben-Ary (Australian, born USA 1967)
The Tissue Culture & Art Project hosted by SymbioticA, The Art and Science
Collaborative Research Laboratory,
School of Anatomy and Human Biology, The University of Western Australia
(Australia, est. 1996)
Pig mesenchymal cells (bone marrow stem cells) and PGA and P4HB
biodegradable, bio-absorbable polymers

Lent by Oron Catts, Ionat Zurr, and Guy Ben-Ary, The Tissue Culture & Art Project
hosted by SymbioticA, The Art and Science Collaborative Research Laboratory,
School of Anatomy and Human Biology, The University of Western Australia
Victimless Leather. Prototype. 2004
Oron Catts (Australian, born Finland 1967), and
Ionat Zurr (Australian, born UK 1970)
The Tissue Culture & Art Project hosted by SymbioticA, The Art and Science Collaborative Research Laboratory, School of Anatomy and Human Biology, The University of Western Australia (Australia, est. 1996)
Biodegradable polymer, connective and bone cells, nutrient media, glassware, and peristaltic pump
Lent by Oron Catts and Ionat Zurr, The Tissue Culture & Art Project hosted by SymbioticA, The Art and Science Collaborative Research Laboratory, School of Anatomy and Human Biology, The University of Western Australia

The Honeycomb Vase "Made by Bees". Prototype. 2006
Tomáš Gabzdil Libertíny (Slovac, born 1979)
Studio Libertiny (The Netherlands, est. 2006)
Beeswax
Lent by Tomáš Gabzdil Libertíny

Lightweeds. 2006
Simon Heijdens (Dutch, born 1978)
Self-developed software
Lent by Simon Heijdens

Biowall. Prototype. 2006
Rachel Wingfield (British, born 1978), and
Mathias Gmachl (Austrian, born 1974)
Loop, pH (UK, est. 2003)
Fiberglass
Lent by Loop, pH

Lovebytes 2007 identity generator. 2007
Matt Pyke (British, born 1975), of
Universal Everything (UK, est. 2004)
Karsten Schmidt (German, born 1975), of
toxi (UK, est. 2000)
Processing software

Courtesy universaleverything.com
Image © Matt Pyke and Karsten Schmidt
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Solar Lampion. Prototype. 2004
**Damian O'Sullivan (Irish, born 1969)**
Polycarbonate and solar cells

Lent by Damian O'Sullivan

Flybot robotic fly. 2007
**Robert J. Wood (American, born 1977)**
Harvard Microrobotics Laboratory (est. 2006),
Harvard School of Engineering and Applied Science (USA, est. 1847)
Ultra high modulus carbon fiber reinforced cyanate ester resin, S2 glass fiber reinforced cyanate ester resin, lead zirconate titanate piezoelectric ceramic (with nickel electrodes), thin film polyimide, and thin film polyester

Lent by Harvard Microrobotics Lab: Robert Wood, Kyujin Cho, Michael Karpelson, Jessica Shang, Peter Whitney

Molecubes functional robots. 2003-04
**Viktor Zykov (Russian, born 1979),**
**Stathis Mytilinaios (Greek, born 1980), and**
**Hod Lipson (Israeli, born 1967)**
Computational Synthesis Lab (USA, est. 2001),
Cornell University (USA, est. 1865)
Somos 9120 epoxy photopolymer
Manufactured by ProtoCall, LCC, USA (2004)
Lent by Cornell University

**03 DESIGN FOR DEBATE**

Robot 1 from the Technological Dreams Series: no 1, Robots project. Model. 2007
**Anthony Dunne (British, born 1964) and**
**Fiona Raby (British, born 1963)**
**Dunne & Raby (UK, est. 1994)**
High-density foam

Lent by Dunne & Raby

Robot 2 from the Technological Dreams Series: no 1, Robots project. Model. 2007
**Anthony Dunne (British, born 1964) and**
**Fiona Raby (British, born 1963)**
**Dunne & Raby (UK, est. 1994)**
Starch and epoxy resin

Lent by Dunne & Raby
Robot 3 from the Technological Dreams Series: no 1, Robots project. Model. 2007
Anthony Dunne (British, born 1964) and
Fiona Raby (British, born 1963)
Dunne & Raby (UK, est. 1994)
English oak and acrylic
Lent by Dunne & Raby

Robot 4 from the Technological Dreams Series: no 1, Robots project. Model. 2007
Anthony Dunne (British, born 1964) and
Fiona Raby (British, born 1963)
Dunne & Raby (UK, est. 1994)
English oak
Lent by Dunne & Raby

All the Robots. Video. 2007
Anthony Dunne (British, born 1964)
Fiona Raby (British, born 1963)
Dunne & Raby (UK, est. 1994)
Noam Toran (American, born 1975)

Courtesy Dunne & Raby

Noam Toran (American, born 1975)

Courtesy Noam Toran

Chest Hair Curler from the Accessories for Lonely Men project. Model. 2001
Noam Toran (American, born 1975)
MDF Medium-density fibreboard, aluminum, and electronic components
Lent by Noam Toran

Cold Feet from the Accessories for Lonely Men project. Model. 2001
Noam Toran (American, born 1975)
MDF Medium-density fibreboard, aluminum, and electronic components
Lent by Noam Toran
Hair Alarm Clock from the Accessories for Lonely Men project. Model. 2001
Noam Toran (American, born 1975)
MDF Medium-density fibreboard, aluminum, electronic components, and wig
Lent by Noam Toran

Heavy Breather from the Accessories for Lonely Men project. Model. 2001
Noam Toran (American, born 1975)
MDF Medium-density fibreboard, aluminum, and electronic components
Lent by Noam Toran

Plate Thrower from the Accessories for Lonely Men project. Model. 2001
Noam Toran (American, born 1975)
MDF Medium-density fibreboard, aluminum, electronic components, and plates
Lent by Noam Toran

Shared Cigarette from the Accessories for Lonely Men project. Model. 2001
Noam Toran (American, born 1975)
MDF Medium-density fibreboard, aluminum, electronic components, and cigarette
Lent by Noam Toran

Sheet Thief from the Accessories for Lonely Men project. Model. 2001
Noam Toran (American, born 1975)
MDF Medium-density fibreboard, aluminum, electronic components, and bedsheet
Lent by Noam Toran

Silhouette Light from the Accessories for Lonely Men project. Model. 2001
Noam Toran (American, born 1975)
MDF Medium-density fibreboard, aluminum, electronic components, and lightbulb
Lent by Noam Toran

ARK-INC. Concept. 2006
Jon Ardern (British, born 1978)
Design Interactions Department (est. 1989),
Royal College of Art (UK, est. 1837)
Lent by Jon Ardern
Smoke Eater from the Utility Pets project. Prototype. 2003  
**Elio Caccavale (Italian, born 1975)**  
Polypropylene

Lent by Elio Caccavale Design Studio

Toy Communicator from the Utility Pets project. Prototype. 2003  
**Elio Caccavale (Italian, born 1975)**  
Polypropylene and rubber

Lent by Elio Caccavale Design Studio

Low-resolution Pig TV from the Utility Pets project. Prototype. 2003  
**Elio Caccavale (Italian, born 1975)**  
Polypropylene

Lent by Elio Caccavale Design Studio

Memento Service from the Utility Pets project. Prototype. 2003  
**Elio Caccavale (Italian, born 1975)**  
Polyurethane and pig snout

Lent by Elio Caccavale Design Studio

Comforting Device from the Utility Pets project. Prototype. 2003  
**Elio Caccavale (Italian, born 1975)**  
Polypropylene and pig snout

Lent by Elio Caccavale Design Studio

Genetic Trace: New Organs of Perception. Concept. 2006  
**Susana Soares (Portuguese, born 1977)**  
Design Interactions Department (est. 1989)  
Royal College of Art (UK, est. 1837)  
Acrylic nails and feathers

Courtesy Susana Soares  
Images by Susana Soares
Genetic Trace part two: Sniffing Others. Concept. 2007
Susana Soares (Portuguese, born 1977)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Linen, crochet, resin, polyester, foam, polyurethane, stereolithography (SLA) epoxy resin, rubber, silicone, copper, fimo, paper, and artificial hair

Lent by Susana Soares
Images by Susana Soares

Mushroom Growth Packaging from Made in Transit, a concept for sustained growth within the supply chain. Prototypes. 2007
Agata Jaworska (Canadian, born Poland 1979)
Design Academy Eindhoven (The Netherlands, est. 1947)
PET plastic, foam growth pad, and fake mushrooms

Lent by Agata Jaworska

New Sensual Interfaces. Concept and video. 2007
Christopher Woebken (German, born 1980)
Design Interactions Department (est. 1989),
Royal College of Art (UK, est. 1837)
Linseeds

Lent by Christopher Woebken

Pox Teddy. Model. 2007
Mikael Metthey (French, born 1983)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Acrylic and TinSil silicone mold rubber

Lent by Mikael Metthey

Nanotopia from the Future Farm project. Concept. 2006-07
Michael Burton (British, born 1977)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Human hair and prosthetics

Courtesy Michael Burton
Image by Michael Burton
The Race. Concept. 2006-07
Michael Burton (British, born 1977)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Resin, silicone, wood, wire, hair, and praying mantis (taxidermy)

Lent by Michael Burton
Images by Michael Burton

Body Modification for Love project. Concept. 2005
Michiko Nitta (Japanese, born 1978)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Latex and acrylic paint

Courtesy Michiko Nitta
Images by Yann Gibelli

Animal Messaging Service from the Extreme Green Guerrillas project. Concept. 2006-07
Michiko Nitta (Japanese, born 1978)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Paper, ink, and acrylic

Lent by Michiko Nitta
Image by Michiko Nitta

Epidermits Interactive Pet from the Cautionary Visions project. Model. 2006
Stuart Karten (American, born 1957),
Steve Piorek (American, born 1974), and
Simon Sollberger (Swiss, born 1973)
Stuart Karten Design (USA, est. 1984)
Polyurethane elastomer, doll hair, acrylic ink, stainless steel, polyurethane, and urethane

Lent by Stuart Karten Design

Desire Management. Video. 2004-06
Noam Toran (American, born 1975)

Courtesy Noam Toran
Risk Watch from the Do you want to replace the existing “normal”? project. Prototype. 2007
Michael Anastassiades (Cypriot, born 1967), Anthony Dunne (British, born 1964), and Fiona Raby (British, born 1963) Silicone, electronics, and MP3 player
Lent by Dunne & Raby, Michael Anastassiades

Statistical Clock from the Do you want to replace the existing “normal”? project. Prototype. 2007
Michael Anastassiades (Cypriot, born 1967), Anthony Dunne (British, born 1964), and Fiona Raby (British, born 1963) Reticulated foam, electronics, micro-controller, and wi-fi connection
Lent by Dunne & Raby, Michael Anastassiades

Perfect Alignment from the Do you want to replace the existing “normal”? project. Prototype. 2007
Michael Anastassiades (Cypriot, born 1967), Anthony Dunne (British, born 1964), and Fiona Raby (British, born 1963) English oak and pink RipStock fabric
Lent by Dunne & Raby, Michael Anastassiades

S.O.C.D (Sexual Obsessive Compulsive Disorder) from the Do you want to replace the existing “normal”? project. Prototype. 2007
Michael Anastassiades (Cypriot, born 1967), Anthony Dunne (British, born 1964), and Fiona Raby (British, born 1963) Steel, silicon, electronics, and computer
Lent by Dunne & Raby, Michael Anastassiades S.O.C.D. video by Christopher Woebken

Necklace. 1995
Ana Mir (Spanish, born 1969) emiliana design studio (Spain, est. 1996) Cotton thread and human hair
Lent by Ana Mir, emiliana design studio
Sweet Love. 2003
Ana Mir (Spanish, born 1969)
emiliana design studio (Spain, est. 1996)
Resin
Lent by Ana Mir, emiliana design studio

Chocolate Nipples. 1995-2003
Ana Mir (Spanish, born 1969)
emiliana design studio (Spain, est. 1996)
Resin
Produced by Enric Rovira (, Spain) (2003)
Lent by Ana Mir, emiliana design studio

04 FUTURE MORES

iBelieve lanyard for iPod Shuffle. 2005
Scott Wilson (American, born 1969)
ABS plastic
National Electronic, China (2005)
Lent by Scott Wilson

MyBio-reactor Cow. Prototype. 2005
Elio Caccavale (Italian, born 1975)
Fireproof nylon and polyester stuffing
Lent by Elio Caccavale Design Studio

MyBio Xenotransplant. Prototype. 2005
Elio Caccavale (Italian, born 1975)
Fireproof nylon and polyester stuffing
Lent by Elio Caccavale Design Studio

MyBio Spider Goat. Prototype. 2005
Elio Caccavale (Italian, born 1975)
Fireproof nylon and polyester stuffing
Lent by Elio Caccavale Design Studio

MyBio Bunny. Prototype. 2005
Elio Caccavale (Italian, born 1975)
Fireproof nylon and polyester stuffing
Lent by Elio Caccavale Design Studio
MyBio Jellyfish. Prototype. 2005  
**Elio Caccavale (Italian, born 1975)**  
Fireproof nylon and polyester stuffing

Lent by Elio Caccavale Design Studio

Dummy-Tummy from the Future Families project. Prototype. 2007  
**Elio Caccavale (Italian, born 1975)**  
Polypropylene and latex

Lent by Elio Caccavale Design Studio

Fertilitoy Egg from the Future Families project. Prototype. 2007  
**Elio Caccavale (Italian, born 1975)**  
Reflective fabric and polyester stuffing

Lent by Elio Caccavale Design Studio

Fertilitoy Sperm from the Future Families project. Prototype. 2007  
**Elio Caccavale (Italian, born 1975)**  
Reflective fabric and polyester stuffing

Lent by Elio Caccavale Design Studio

Fertilitoy Tummy from the Future Families project. Prototype. 2007  
**Elio Caccavale (Italian, born 1975)**  
Fireproof nylon and polyester stuffing

Lent by Elio Caccavale Design Studio

AfterLife. Models. 2001-ongoing  
**James Auger (British, born 1970)**  
**Jimmy Loizeau (British, born 1968)**  
Design Interactions Department (est. 1989)  
Royal College of Art (UK, est. 1837)  
Polycarbonate and aluminum

Lent by Auger-Loizeau

Digital Remains. Prototypes. 2006  
**Michele Gauler (German, born 1973)**  
Design Interactions Department (est. 1989)  
Royal College of Art (UK, est. 1837)  
Aluminum, wood, acrylic, and electronic media

Lent by Michele Gauler and Eyal Burstein, Beta Tank
Doffing Headphone. Concept. 2006
Synnøve Fredericks (British, born 1983)
Central Saint Martins College of Art and Design (UK, est. 1989)
Bluetooth-powered headphones, brass, faux tortoise shell, and hand-carved English holly wood
Lent by Synnøve Fredericks

SoMo1 Electric Shock Mobile from the Social Mobiles project. Model. 2002
Crispin Jones (British, born 1974),
Graham Pullin (British, born 1964),
Anton Schubert (British, born 1968), and
Mat Hunter (British, born 1970)
IDEO London (UK, est. 1991)
Lime wood, steel, ABS plastic, and GSM phone
Lent by IDEO

SoMo2 Speaking Mobile from the Social Mobiles project. Model. 2002
Crispin Jones (British, born 1974),
Graham Pullin (British, born 1964),
Anton Schubert (British, born 1968), and
Mat Hunter (British, born 1970)
IDEO London (UK, est. 1991)
Lime wood, steel, ABS plastic, and GSM phone
Lent by IDEO

SoMo3 Musical Mobile from the Social Mobiles project. Model. 2002
Crispin Jones (British, born 1974),
Graham Pullin (British, born 1964),
Anton Schubert (British, born 1968), and
Mat Hunter (British, born 1970)
IDEO London (UK, est. 1991)
Lime wood, steel, ABS plastic, and GSM phone
Lent by IDEO

SoMo4 Knocking Mobile from the Social Mobiles project. Model. 2002
Crispin Jones (British, born 1974),
Graham Pullin (British, born 1964)
Anton Schubert (British, born 1968), and
Mat Hunter (British, born 1970)
IDEO London (UK, est. 1991)
Lime wood, steel, ABS plastic, and GSM phone
Lent by IDEO
SoMo5 Catapult Mobile from the Social Mobiles project. Model. 2002  
Crispin Jones (British, born 1974),  
Graham Pullin (British, born 1964),  
Anton Schubert (British, born 1968), and  
Mat Hunter (British, born 1970)  
IDEO London (UK, est. 1991)  
Lime wood, steel, ABS plastic, and GSM phone  
Lent by IDEO

Narco from the Analeptic project. Model. 2006  
Marie-Virginie Berbet (French, born 1979)  
École nationale supérieure de création industrielle (ENSCI - Les Ateliers) (France, est. 1982)  
Plexiglass and Styron polystyrene resin  
Lent by Marie-Virginie Berbet  
Prototype sponsored by Zyken and byVolta

Cyclo from the Analeptic project. Model. 2006  
Marie-Virginie Berbet (French, born 1979)  
École nationale supérieure de création industrielle (ENSCI - Les Ateliers) (France, est. 1982)  
Polyamide  
Lent by Marie-Virginie Berbet  
Prototype sponsored by Zyken and byVolta

Le Temps Blanc. Concept. 2006  
Julien Arnaud (French, born 1974),  
with scientific consultant Alain Nicolas (French, born 1965)  
École Supérieure Art & Design Saint-Étienne (ESADSE / Cité du Design) (France, est. 1857)  
DuPont Corian, neon tubes, speakers, soundproof foam, MDF, aluminum, and polyethylene  
Lent by Julien Arnaud

HULGER P*PHONE. 2005  
Nicolas Roope (British, born 1972) and  
Sebastien Noel (French, born 1977)  
Hulger (UK, est. 2004)  
Polycarbonate plastic, speaker, microphone, and wires  
Manufactured by Hulger, UK, est. 2004 (2005)  
Lent by Hulger
Design and the Elastic Mind | Exhibition Checklist

Gachacon TV remote controller from the Arclassy series. 2002
**Nobumichi Tosa** (Japanese, born 1967)
**Maywa Denki** (Japan, est. 1993)
ABS plastic, electric circuit, steel, and LED
Manufactured by Cube Co., Ltd., Japan (2002)
Lent by Yoshimoto Kogyo Co., Ltd. / Maywa Denki

HULGER PENEOLOPE*PHONE. 2005
**Nicolas Roope** (British, born 1972) and
**Kam Young** (New Zealander, born 1978)
**Hulger** (UK, est. 2004)
Polycarbonate plastic, speaker, microphone, and wires
Manufactured by Hulger, UK, est. 2004 (2005)
Lent by Hulger

05 ENERGY

Standby from the Climatised Objects project. Prototypes. 2007
**Toby Hadden** (British, born 1982) and
**David Cameron** (British, born 1981)
**&made** (UK, est. 2006)
Silicone, plastic, and rubber

Lent by &made, Toby Hadden and David Cameron

Q Quinton Spray from the Elements project. Prototype. 2006
**Mathieu Lehanneur** (French, born 1974)
Stainless steel, PVC coating, and sensor

Lent by Frac Ile-de-France

dB White Noise Diffuser from the Elements project. Prototype. 2006
**Mathieu Lehanneur** (French, born 1974)
ABS plastic, mini speakers, electric engine, and charger

Lent by Frac Ile-de-France

C° Infrared Heating from the Elements project. Prototype. 2006
**Mathieu Lehanneur** (French, born 1974)
Elastomer, thermal camera, infra-red heating, and memory-shape alloy

Prototype financed by VIA (Valorisation de l’Innovation dans l’Ameublement / French institution for the Valorization of Innovation in Furnishing)
K Day Light Receiver-Transmitter from the Elements project. Prototype. 2006
Mathieu Lehanneur (French, born 1974)
Aluminum, optical fibers, photoelectric cells, high-luminosity white LEDs, and sensor

Prototype financed by VIA (Valorisation de l'Innovation dans l'Ameublement / French institution for the Valorization of Innovation in Furnishing)

O Oxygen Generator from the Elements project. Prototype. 2006
Mathieu Lehanneur (French, born 1974)
Glass, aluminum, magnetic stirrer, white LEDs, and oxymetric probe

Lent by Frac Ile-de-France

Bel-Air organic air-filtering system. Prototypes. 2007
Mathieu Lehanneur (French, born 1974)
David Edwards (French, born USA 1961), of School of Engineering and Applied Sciences, Faculty of Arts and Sciences (FAS) (USA, est. 1890), Harvard University (USA, est. 1636), and Le Laboratoire (France, est. 2007)
Fans, Pyrex glass, aluminum, and fake plants

Lent by Le Laboratoire, Art Science Experience
© Mathieu Lehanneur

Light Wind. Prototype. 2006
Jeroen Verhoeven (Dutch, born 1976), Joep Verhoeven (Dutch, born 1976), and Judith de Graauw (Dutch, born 1976)
Demakersvan (The Netherlands, est. 2004)
Polyester textile, stainless steel, and wood

Lent by Galerie kreo

Solar Bottle. Prototype. 2006
Alberto Meda (Italian, born 1945), and Francisco Gómez Paz (Argentinian, born 1975)
PET plastic

Lent by Alberto Meda and Francisco Gómez Paz
Portable Light. Prototype. 2004-ongoing
Sheila Kennedy (American, born 1959),
Sloan Kulper (American, born 1980),
Jason O’Mara (American, born 1983),
Patricia Gruits (American, born 1983),
Heather Micka-Smith (American, born 1978), and
Casey Smith (American, born 1970)
KVA MATx (USA, est. 2000)
Printed circuit board, digital microprocessor-integrated circuit chip, recyclable, waterproof PET nonwoven tarp fabric, aluminized antimicrobial nonwoven fabric reflector, Copper Indium Gallium deSelenide flexible solar cells, and High Brightness Light Emitting Diode semiconductors (HBLEDs)

Lent by Sheila Kennedy, AIA, Principal Kennedy & Violich Architecture, Ltd., Director of Design & Applied Research: MATx

NNS: Non-Stop Shoes. Model. 1999
Emili Padrós (Spanish, born 1969)
emiliana design studio (Spain, est. 1996)
Polypropylene rubber, horse fur with reflective plastic film, and bulb

Lent by Emili Padrós, emiliana design studio

Lunchbox Laboratory. Prototype. 2007
Amy Franceschini (American, born 1970), and
Michael Swaine (American, born 1971), of
Futurefarmers (USA, est. 1995)
Jonathan Meuser (American, born 1980), of
National Renewable Energy Laboratory (NREL) (USA, est. 1977)
Stijn Schiffeleers (Belgian, born 1975), of
Boutique Vizique (Belgium, est. 2000), and
Noah Murphy-Reinhertz (American, born 1978)
Recycled milk bottles, rubber, wood, LEDs, and electronics

Lent by Futurefarmers

Humanair Air Purifier. Prototype. 2007
Andrzej Loreth (Swedish, born 1947),
Stefan Spoerl (German, born 1979),
Manuel Saez (Argentinian, born 1973), and
Brad Augustine (American, born 1975)
Humanscale (USA, est. 1982)
ABS plastic, perforated stainless steel, and polyethylene-coated paper

Lent by Humanscale
PLUMEN low-energy light bulb. Prototype. 2007
Nicolas Roope (British, born 1972)
Hulger (UK, est. 2004)
Glass, ABS plastic, wires, and electronic fittings
Lent by Hulger

06 INTERFACES

N702iS water-level interface. 2005-06
Oki Sato (Canadian, born 1977), of
nendo (Japan, est. 1991)
Takaya Fukumoto (Japanese, born 1974), of
NEC Design, Ltd. (Japan, est. 1971)
NTT DoCoMo (Japan, est. 1992)
Flash software
Manufactured by NEC Corporation, Japan (2006)
Lent by NTT DoCoMo, Inc

Motorola Sparrow RFID (Radio Frequency Identification) scanning device. Models. 2006-ongoing
Johan Liden (Swedish, born 1974) and
Yifei Zha (Chinese, born 1981)
aruliden (USA, est. 2006)
Injection molded plastic, glass, and aluminum
Lent by Motorola, Inc. Enterprise Mobility Business

PainStation. Prototype. 2001-04
Volker Morawe (German, born 1970), and
Tilman Reiff (German, born 1971), of
 ///////////fur//// art entertainment interfaces (Germany, est. 2001)
Academy of Media Arts, Cologne (Germany, est. 1994)
Wood, steel, custom electronics, and mechanics
Lent by ///////////fur//// art entertainment interfaces

Wizkid. Prototype. 2006-07
Martino d'Esposito (Swiss/Italian, born Cyprus 1976)
Frédéric Kaplan (French, born 1974), of
CRAFT Laboratory (Centre de Recherche et d'Appui pour la Formation et ses Technologies) (Switzerland, est. 2002)
École Polytechnique Fédérale de Lausanne (Switzerland, est. 1853)
Aluminum, polycarbonate plastic, and elastan-polyamide fabric
Lent by Martino d'Esposito, Frédéric Kaplan, and École Polytechnique Fédérale de Lausanne
LED Dog Tail Communicator from the Augmented Animals project. Prototype. 2006
James Auger (British, born 1970)  
Jimmy Loizeau (British, born 1968)  
LEDs, programmed electronic components, and automated wagging tail

Lent by Auger-Loizeau  
Image by James Auger

Living Sensors. Model. 2005
Tomoaki Yanagisawa (Japanese, born 1980)  
Design Interactions Department (est. 1989)  
Royal College of Art (UK, est. 1837)  
Latex, plastic, and intravenous drip tube

Lent by Tomoaki Yanagisawa

Hu-Poi. Prototype. 2006
Eriko Matsumura (Japanese, born 1980)  
Design Interactions Department (est. 1989)  
Royal College of Art (UK, est. 1837)  
Epoxy resin and electronics

Lent by Eriko Matsumura

Dan Phiffer (American, born 1980)  
Mushon Zer-Aviv (Israeli, born 1976)  
Interactive Telecommunications Program (est. 1979)  
Tisch School of the Arts, New York University (USA, est. 1965)  
Processing software, Java.awt.Robot library, Google Earth, LED keychains, and Webcam

Lent by Dan Phiffer and Mushon Zer-Aviv  
Images by Atlas Gloves

Troika (UK, est. 2003)  
Custom C++ software, Apple Sudden Motion Sensor, modified USB key, and cast resin

Lent by Troika
Pong Table. Prototype. 2006
Moritz Waldemeyer (German, born 1974)
DuPont Corian®, aluminum, and electronic circuits
Prototype by DuPont, Belgium (,)
2D:3D Ltd., UK (, and)
Moritz Waldemeyer, German, born 1974
Lent by Rabih Hage Gallery, London

Paper Alarm Clock from the Flat Futures project: Exploring Digital Paper. Models. 2007
Miquel Mora (Spanish, born 1974)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Paper and adhesive tape
Lent by Miquel Mora

Smart Tapes from the Flat Futures project: Exploring Digital Paper. Model. 2007
Miquel Mora (Spanish, born 1974)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Paper and adhesive tape
Lent by Miquel Mora

Memory Envelope, Memory Probes from the Flat Futures project: Exploring Digital Paper. Model. 2007
Miquel Mora (Spanish, born 1974)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Paper and adhesive tape
Lent by Miquel Mora

Miquel Mora (Spanish, born 1974)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Paper, PVC plastic, and adhesive tape
Lent by Miquel Mora
Smart Fruit Label from the Flat Futures project: Exploring Digital Paper. Models. 2007
Miquel Mora (Spanish, born 1974)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Adhesive tape
Lent by Miquel Mora

Bubble Screen. Prototype. 2007
Eyal Burstein (Israeli, born 1977)
Beta Tank (UK, est. 2007)
Pneumatics, oils, and acrylic plastic
Prototype by Festo Great Britain, UK
Beta Tank, UK, est. 2007
Courtesy Eyal Burstein and Michele Gauler, Beta Tank

Shigeru Naito (Japanese, born 1944), of
Department of Naval Architecture and Ocean Engineering, Osaka University (Japan, est. 1931)
Ettsuro Okuyama (Japanese, born 1977), of
Akishima Laboratories (Mitsui Zosen), Inc. (Japan, est. 1917)
Aluminum, acrylic plastic, and water
Prototype by Akishima Laboratories (Mitsui Zosen), Inc., Japan, est. 1917
Courtesy Akishima Laboratories (Mitsui Zosen), Inc.

bit.fall. Prototype. 2001-06
Julius Popp (German, born 1973)
Hochschule für Grafik und Buchkunst Leipzig (Germany, est. 1764)
Water, pump, magnetic valves, and electronic circuits
Prototype by Spherical Robots, Germany
Courtesy Galerie Dogenhaus, Leipzig, and Galerie nächst St. Stephan, Vienna

flicflex flexible display. Concept and video. 2005
Christopher Woebken (German, born 1980)
Flash software

Microsoft High Capacity Color Barcode. Prototype. 2004-ongoing
Gavin Jancke (British, born 1970)
Microsoft Research (USA, est. 1991)

Lent by Microsoft Research
Image by Microsoft Corporation
Emili Padrós (Spanish, born 1969)
emiliana design studio (Spain, est. 1996)
Silicone and rubber

Lent by Emili Padrós, emiliana design studio

Snip n’ Snip digital still camera from the odo project. Model. 2007-ongoing
Sony Corporation, Creative Center (Japan, est. 1961)
Sony Design Center, Los Angeles (USA, est. 2005)
Vegetable-based plastic and natural gum rubber

Lent by Sony Corporation, Creative Center

Push n’ Play viewer from the odo project. Model. 2007-ongoing
Sony Corporation, Creative Center (Japan, est. 1961)
Sony Design Center, Los Angeles (USA, est. 2005)
Vegetable-based plastic and natural gum rubber

Lent by Sony Corporation, Creative Center

Crank n’ Capture moving image camera from the odo project. Model. 2007-ongoing
Sony Corporation, Creative Center (Japan, est. 1961)
Sony Design Center, Los Angeles (USA, est. 2005)
Vegetable-based plastic and natural gum rubber

Lent by Sony Corporation, Creative Center

Pull n’ Play headphones from the odo project. Model. 2007-ongoing
Sony Corporation, Creative Center (Japan, est. 1961)
Sony Design Center, Los Angeles (USA, est. 2005)
Vegetable-based plastic and natural gum rubber

Lent by Sony Corporation, Creative Center

juiceBox solar battery from the odo project. Model. 2007-ongoing
Sony Corporation, Creative Center (Japan, est. 1961)
Sony Design Center, Los Angeles (USA, est. 2005)
Vegetable-based plastic and natural gum rubber

Lent by Sony Corporation, Creative Center
Instant Labelling Tape. 2004
Hannes Koch (German, born 1975), Florian Ortkrass (German, born 1975), and Stuart Wood (British, born 1980)
rAndom International (UK, est. 2002)
Adhesive tape
Manufactured by Suck UK Ltd., UK (2008)
Lent by rAndom International and Suck UK Ltd.

PixelTape. 2005
Hannes Koch (German, born 1975), Florian Ortkrass (German, born 1975), and Stuart Wood (British, born 1980)
rAndom International (UK, est. 2002)
Adhesive tape
Manufactured by Suck UK Ltd., UK (2008)
Lent by rAndom International and Suck UK Ltd.

Bitman. 2001
Nobumichi Tosa (Japanese, born 1967)
Ryota Kuwakubo (Japanese, born 1971)
Maywa Denki (Japan, est. 1993)
Yoshimoto Kogyo Co., Ltd. (Japan, est. 1912)
ABS plastic, electric circuit, steel, LED, and rubber
Manufactured by Cube Co., Ltd., Japan (2001)
Lent by Yoshimoto Kogyo Co., Ltd. / Maywa Denki

Shu-feng Liu (Chinese, born 1975), Li-qing Zhou (Chinese, born 1981), Guo-ning Hu (Chinese, born 1978), and Sang-Jun Yoo (Korean, born 1983)
Samsung Design China (China, est. 2004), a division of Samsung Electronics (Korea, est. 1969)
PMMA plastic and silicone
Lent by Samsung Design China
Lab-on-a-Card. Prototype. 2004-ongoing
Bernhard Weigl (Austrian, born 1966), of PATH (Program for Appropriate Technology in Health) (USA, est. 1977)
John Gerdes (American, born 1948), of Micronics, Inc. (USA, est. 1966)
Paul Yager (American, born 1954), of University of Washington (USA, est. 1861)
Phil Tarr (American, born 1952), of Washington University in St. Louis (USA, est. 1853)
Acrylic and Mylar

Lent by PATH

A History of Game Controllers. 2007
Damien Lopez (American, born 1982)
Carnegie Mellon University (USA, est. 1900)
Adobe Illustrator software

Courtesy Damien Lopez
Image by Damien Lopez

MX Air mouse. 2007
Marcel Twohig (Irish, born 1977), and Peter Sheehan (Irish, born 1966)
Logitech, Inc. (Switzerland, est. 1981)
Polycarbonate/ABS plastic and PTFE
Lent by Logitech, Inc.

LOMAK light operated mouse and keyboard. 2005
Michael Watling (New Zealander, born 1941)
Peter Haythornthwaite (New Zealander, born 1944),
Andrew Haythornthwaite (New Zealander, born 1980),
David Haythornthwaite (New Zealander, born 1978), and Dean Edgington (New Zealander, born 1976)
Opdo Limited (New Zealand, est. 2003)
Haythornthwaite//Creativelab (New Zealand, est. 2000)
Keyboard: ABS, Mylar substrate with screenprinted graphics, printed circuit board;
headpointer: ABS and polypropylene/TPR
Manufactured by Opdo Limited, New Zealand, est. 2003 (2007)
Lent by Opdo Limited, Auckland, New Zealand

07 SENSES
Surround Sound Eyewear. Prototypes. 2005
Sam Hecht (British, born 1969),
Kim Colin (American, born 1961),
Ippei Matsumoto (Japanese, born 1973), and
Gwendolyn Floyd (American, born 1979)
Industrial Facility (UK, est. 2002)
Polycarbonate and laminated cellulose acetate
Lent by Industrial Facility

Smell +. Prototype. 2006-07
James Auger (British, born 1970)
Jimmy Loizeau (British, born 1968)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Epoxy resin, aluminum, and polyurethane
Lent by Auger-Loizeau
Funded by Philips Design
Drawing by Auger-Loizeau

Eye Candy from the Sensory Plasticity project. Models. 2007
Eyal Burstein (Israeli, born 1977), and
Michele Gauler (German, born 1973)
Beta Tank (UK, est. 2007)
Copper, steel, polyurethane, and sugar
Lent by Eyal Burstein and Michele Gauler, Beta Tank

Face Object from the BEE’S project. Prototype. 2007
Susana Soares (Portuguese, born 1977)
Design Interactions Department (est. 1989),
Royal College of Art (UK, est. 1837)
Blown handmade glass
Prototype by Crisform, Portugal
Lent by Susana Soares

Fertility Object from the BEE’S project. Prototype. 2007
Susana Soares (Portuguese, born 1977)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Borosilicate
Prototype by Vilabo, Portugal
Lent by Susana Soares
Power Assist Suit. Prototype. 2005
Keijiro Yamamoto (Japanese, born 1942)
Department of Robotics and Mechatronics, Faculty of Engineering,
Kanagawa Institute of Technology (Japan, est. 1963)
Aluminum and other materials

Courtesy Dr. Keijiro Yamamoto, Kanagawa Institute of Technology
Image by Dr. Keijiro Yamamoto

Powered ankle-foot prosthesis. Prototype. 2005-07
Hugh Herr (American, born 1964),
Jeff Weber (American, born 1969), and
Bruce Deffenbaugh (American, born 1946)
Biomechatronics Group (USA, est. 2004)
Massachusetts Institute of Technology (USA, est. 1861)
iWalk, Inc. (USA, est. 2006)
Titanium, aluminum, carbon composite, and polyurethane
Prototype by iWalk, Inc., USA, est. 2006
Lent by Massachusetts Institute of Technology

Emergent Surface. Prototype. 2007
Chuck Hoberman (American, born 1956)
Matthew Davis (American, born 1975),
Ziggy Drozdowski (American, born 1982), and
David Wight (American, born 1983)
Hoberman Associates, Inc. (USA, est. 1990)
Stainless steel and aluminum
Prototype by Milgo/Bufkin, USA, est. 1916 (, and)
QuickSilver Controls, Inc., USA, est. 1996
Commissioned by The Museum of Modern Art in occasion of the exhibition Design and the Elastic Mind

The Mind Chair from the Sensory Plasticity project. Model. 2007
Eyal Burstein (Israeli, born 1977), and
Michele Gauler (German, born 1973)
Beta Tank (UK, est. 2007)
Peter Marigold (British, born 1974)
Fiberglass, steel, and electronic components

Lent by Eyal Burstein and Michele Gauler, Beta Tank
Robotic Suit for Upper-limb Rehabilitation. Prototype. 2006
Hidenori Miyazawa (Japanese, born 1957)
Engineering: Hiromichi Fujimoto (Japanese, born 1970), and
Keisuke Ueda (Japanese, born 1972)
Panasonic (Japan, est. 1918)
Polyurethane, cotton, nylon, stainless steel, and aluminum

Lent by Panasonic

Precise Object from the BEE’S project. Prototype. 2007
Susana Soares (Portuguese, born 1977)
Design Interactions Department (est. 1989),
Royal College of Art (UK, est. 1837)
Borosilicate
Prototype by Vilabo, Portugal
Lent by Susana Soares

08 ALL TOGETHER NOW

Sonumbra. 2006
Rachel Wingfield (British, born 1978), and
Mathias Gmachl (Austrian, born 1974)
Loop, pH (UK, est. 2003)
Electroluminescent lace, camera, speakers, electronics, and software

Lent by Loop, pH

Distellamap (Pac-Man). 2004
Ben Fry (American, born 1975)
Processing software

Courtesy Ben Fry
Image by Ben Fry

Cinema Redux: Vertigo. 2004
Brendan Dawes (British, born 1966)
magneticNorth (UK, est. 2000)
Processing software

Courtesy brendandawes.com
Image by Brendan Dawes

08 EXISTENZMAXIMUM
Design and the Elastic Mind | Exhibition Checklist

Social Tele-presence. Prototype. 2001
James Auger (British, born 1970)
Jimmy Loizeau (British, born 1968)
Design Interactions Department (est. 1989)
Royal College of Art (UK, est. 1837)
Acrylic plastic, aluminum, electronic media, Sony Glasstron glasses, video and R/C radio receivers

Lent by Auger-Loizeau
Image by James Auger and Onkar Kular

Interstitial Space Helmet (ISH). Prototype. 2004
James Auger (British, born 1970)
Jimmy Loizeau (British, born 1968)
Polycarbonate and electronic media

Lent by Auger-Loizeau
Drawing by Auger-Loizeau

Isophone. Prototype. 2003
James Auger (British, born 1970)
Jimmy Loizeau (British, born 1968)
Media Lab Europe (Ireland (2000-05))
Stainless steel, fiberglass, aluminum, and electronic media

Lent by Auger-Loizeau
Drawing and image by Auger-Loizeau

Exploded Monologues wearable voice-amplifier device. Prototype. 2003
Sebastien Noel (French, born 1977)
Troika (UK, est. 2003)
Steel and electronic components

Lent by Sebastien Noel

SMS Guerrilla Projector. Prototype. 2003
Troika (UK, est. 2003)
Steel, nylon, aluminum, and electronical and optical components

Lent by Troika

09 ALL TOGETHER NOW
Design and the Elastic Mind | Exhibition Checklist

One_shot.MGX Stool. 2006
**Patrick Jouin (French, born 1967)**
Laser-sintered nylon
Materialise NV, Belgium, est. 1995
Gift of the A+D Circle

FS Bowl. 2005
**Amanda Levete (British, born 1959)**
Laser-sintered nylon
Materialise NV, Belgium, est. 1995
Clarissa Bronfman Purchase Fund

Shadow Monsters. 2004-ongoing
**Philip Worthington (British, born 1977)**
Java, Processing, BlobDetection, SoNIA, and Physics software

Lent by Philip Worthington

CoReFab #116 chairs. Models. 2006
**Ammar Eloueini (French, born Lebanon 1968)**
AEDS Ammar Eloueini Digit-all Studio (France, est. 1997)
Laser-sintered polyamide resin

Lent by Ammar Eloueini

Sketch Furniture. 2005
**Sofia Lagerkvist (Swedish, born 1976), Charlotte von der Lancken (Swedish, born 1978), Anna Lindgren (Swedish, born 1977), and Katja Sävström (Swedish, born 1976), of Front Design (Sweden, est. 2004)**
Prototypes by Acron Formservice AB (Sweden) (2005)
Motion capture by Crescent (Japan) (2006)
Polyamide resin

Lent by Friedman Benda

Laser-sintered textiles. 2000-06
**Janne Kyttanen (Finnish, born 1974), and Jiri Evenhuis (Dutch, born 1973)**
**Freedom Of Creation (The Netherlands, est. 2000)**
Laser-sintered polyamide resin
Lent by Freedom Of Creation
Punchbag handbag. 2005
Janne Kyttanen (Finnish, born 1974), and
Jiri Evenhuis (Dutch, born 1973)
Freedom Of Creation (The Netherlands, est. 2000)
Laser-sintered polyamide resin
Lent by Freedom Of Creation

Macedonia fruit bowl. 2007
Janne Kyttanen (Finnish, born 1974)
Freedom Of Creation (The Netherlands, est. 2000)
Quartz sand with epoxy infiltration
Lent by Freedom Of Creation

V_bag. 2003
Janne Kyttanen (Finnish, born 1974), and
Jiri Evenhuis (Dutch, born 1973)
Freedom Of Creation (The Netherlands, est. 2000)
Laser-sintered polyamide resin
Lent by Freedom Of Creation

Sugar interface for the XO Laptop. 2006-07
Lisa Strausfeld (American, born 1964),
Christian Marc Schmidt (German, born 1977), and
Takaaki Okada (Japanese, born 1978), of
Pentagram (UK and USA, est. 1972)
Walter Bender (American, born 1956), and
Eben Eliason (American, born 1982), of
One Laptop per Child (USA, est. 2005)
Marco Pesenti Gritti (Italian, born 1978), and
Christopher Blizzard (American, born 1973), of
Red Hat, Inc. (USA, est. 1993)
Design: Illustrator, Photoshop, Flash, Inkscape, and GIMP (GNU Image Manipulation Program) software; implementation: Python, GTK+ (GIMP Toolkit), and Cairo software
Lent by One Laptop per Child
I Want You To Want Me. 2007-ongoing
Jonathan Harris (American, born 1979), of
Number 27 (USA, est. 2002)
Sep Kamvar (American, born 1977)
C++ software
Music by Stars

Commissioned by The Museum of Modern Art in occasion of the exhibition Design and the Elastic Mind

Babel Blocks. 2007
Constantin Boym (American, born Russia, 1955), and
Laurene Leon Boym (American, born 1964)
Boym Partners Inc. (USA, est. 1986)
Wood

Lent by Boym Partners Inc.

James Powderly (American, born 1976),
Evan Roth (American, born 1978), and
Theo Watson (British, born 1981)
Graffiti Research Lab (USA, est. 2006)
60 mW green laser, digital projector, camera, and custom GNU software (L.A.S.E.R. Tag V1.0, using OpenFrameworks)

Courtesy F.A.T. Lab 2008

Sitting Chairs. 2004
Lucas Maassen (Dutch, born 1975)
Untitled Nations (The Netherlands and Belgium, est. 2006)
MDF (Medium-Density Fiberboard) and solid oak

Lent by Lucas Maassen
XO Laptop from the One Laptop per Child (OLPC) project. 2005-ongoing  
Nicholas Negroponte (American, born 1943),  
Rebecca Allen (American, born 1953),  
Mary Lou Jepsen (American, born 1965),  
Mark Foster (American, born 1960),  
Michail Bletsas (Greek, born 1967), and  
V. Michael Bove (American, born 1960), of  
One Laptop per Child (USA, est. 2005)  
Yves Béhar (Swiss, born 1967), and  
Bret Recor (American, born 1974), of  
fuseproject (USA, est. 1999)  
Jacques Gagné (Canadian, born 1959), of  
Gecko Design (USA, est. 1996)  
Colin Bulthaup (American, born 1976), of  
Squid Labs (USA, est. 2004)  
John Hutchinson (South African, born 1952), of  
Freeplay Energy Plc. (South Africa, est. 1996)  
Quanta (Taiwan, est. 1988)  
PC/ABS plastic, rubber, and other materials  
Manufactured by Quanta, Taiwan, est. 1988 (2007)  
Lent by Yves Béhar / fuseproject  

ASK ME! culture badges. 2004  
Emili Padrós (Spanish, born 1969)  
emiliana design studio (Spain, est. 1996)  
Paper, acetate film, and tin  
Lent by Emili Padrós, emiliana design studio  

Mylight.MGX. 2006  
Lars Spuybroek (Dutch, born 1959)  
NOX (The Netherlands, est. 1993)  
Polyamide resin  
Manufactured by Materialise NV, Belgium, est. 1995 (2007)  
Lent by Materialise.MGX  

beerhunter.ca. 2005-ongoing  
Janis Mussat (Canadian, born 1970), and  
Adam Putter (Canadian, born 1975), of  
Bad Math Inc. (Canada, est. 2001)  
PHP, MySQL, Photoshop, and Google Maps API Software  

Courtesy Bad Math Inc.
flood.firetree.net. 2006-ongoing
Alex Tingle (British, born 1969), of
firetree.net (UK, est. 2002)
Debian GNU/Linux, Apache, Google Maps API, and Flood Maps custom software

Courtesy Alex Tingle

fastfoodmaps.com. 2005-ongoing
Ian Spiro (American, born 1981)
JavaScript, PHP, SQL (Structured Query Language), HTML, CSS, Awk, Sed, Bash, Illustrator, and Google Maps API software

Courtesy Ian Spiro

safe2pee.org. 2006-ongoing
Bailey Stevens (American, born 1984)
Genderqueer Hackers Collective (USA, est. 2006)
Linux, Apache, MySQL, PHP, Yahoo Geocoding API, Phoogle, Google Maps API software, and S2P engine

Courtesy Genderqueer Hackers Collective

gmap-pedometer.com. 2005 - ongoing
Paul Degnan (American, born 1971)
JavaScript, HTML, PHP, and Google Maps API software

Courtesy Paul Degnan

globalincidentmap.com. 2006-ongoing
Morgan Clements (American, born 1969), of
TransitSecurityReport.com, Inc. (USA, est. 2006)
MySQL, RSS (Really Simple Syndication), KML (Keyhole Markup Language), Google Maps API, and proprietary software

Courtesy Morgan Clements

twittervision.com. 2007-ongoing
David Troy (American, born 1971), of
Popvox LLC (USA, est. 2004)
JavaScript, Ruby On Rails, MySQL, and Google Maps API software

Courtesy David Troy
yellowarrow.net/capitolofpunk. 2006- ongoing
Kara Oehler (American, born 1978),
Christopher Allen (American, born 1980),
Jesse Shapins (American, born 1980),
Brian House (American, born 1979),
Geoffrey Guinta (American, born 1984), and
Nathan Phillips (American, born 1977), of
Counts Media, Inc. (USA, est. 2004)
Kapono Chung (American, born 1981), and
Chahn Chung (American, born 1977), of
Make Believe (USA, est. 2006)
PHP, JavaScript, TextWrangler, Flash, Illustrator, Photoshop, After Effects,
Dreamweaver, and Google Maps API software

Courtesy Counts Media, Inc.

chicagocrime.org. 2005-ongoing
Adrian Holovaty (American, born 1981), and
Wilson Miner (American, born 1981)
Django and Google Maps API (Application Programming Interface) software

Courtesy Adrian Holovaty and Wilson Miner

dartmaps.mackers.com. 2005-ongoing
David McNamara (Irish, born 1980), of
mackers.com (Ireland, est. 1999)
PHP, XML (Extensible Markup Language), HTML (Hypertext Markup Language),
JavaScript, CSS (Cascading Style Sheets), and Google Maps API software

Courtesy David McNamara

Misdaadkaart.nl. 2006-ongoing
Robert Jan de Heer (Dutch, born 1972), of
J3Trust B.V. (The Netherlands, est. 2006)
PHP, MySQL, Linux, and Google Maps API software

Courtesy Robert Jan de Heer (J3Trust B.V.)

Noel Gorelick (American, born 1968), and
Michael Weiss-Malik (American, born 1978)
Mars Space Flight Facility, Arizona State University (USA, est. 1990), and
Google Inc. (USA, est. 1998)
ImageMagick, DaVinci, Google Earth Fusion, and Google Maps API software

Courtesy Google
flickrvision.com. 2007-ongoing
David Troy (American, born 1971), of
Popvox LLC (USA, est. 2004)
JavaScript, Ruby On Rails, MySQL (SQL open-source database), and Google Maps API software

Courtesy David Troy

Noel Gorelick (American, born 1968),
Michael Weiss-Malik (American, born 1978),
Matthew D. Hancher (American, born 1978),
Michael Joseph Broxton (American, born 1981),
Noelle Steber (American, born 1985),
Roman Kofman (American, born 1985), and
Patrick J. Auld (American, born 1985)
NASA Ames Research Center (USA, est. 1939)
Google Inc. (USA, est. 1998)
Google Maps API, NASA Vision Workbench, Adobe Photoshop, Autopano Pro, and Adobe Lightroom

Courtesy Google

Potenco Pull-Cord Generator (PCG). Prototype. 2006
Colin Bulthaup (American, born 1976), of
Potenco, Inc. (USA, est. 2006)
Yves Béhar (Swiss, born 1967), and
Bret Recor (American, born 1974), of
fuseproject (USA, est. 1999)
Jacques Gagné (Canadian, born 1959), of
Gecko Design (USA, est. 1996)
Cast urethane plastic, stainless steel, nylon webbing, copper, circuit boards, electronic components, wire, and lead-free solder

Lent by Potenco, Inc.

Attracted to Light from the Long Exposure series. Prototype. 2005
Geoffrey Mann (British, born 1980)
Nylon

Lent by Geoffrey Mann

CoReFab#116_25. 2006
Ammar Eloueini (French, born Lebanon 1968)
AEDS Ammar Eloueini Digit-all Studio (France, est. 1997)
Polyamide nylon

Gift of The Contemporary Arts Council of The Museum of Modern Art
LRPT (La Región de los Pantalones Transfronterizos). Prototype. 2005-06
Raúl Cárdenas Osuna (Mexican, born 1969)
Torolab (Mexico, est. 1995)
Global Positioning System, MaxScript, and 3d MAX software

Lent by Galeria OMR, Mexico City

senseable city laboratory (USA, est. 2003),
Massachusetts Institute of Technology (USA, est. 1861)
Carlo Ratti (Italian, born 1971)
Kristian Kloeckl (Austrian, born 1977),
Assaf Biderman (Israeli, born 1977),
Margaret Ellen Haller (American, born 1980), and
Francisca Rojas (Chilean, born 1976)
Visual software:Francesco Calabrese (Italian, born 1982),
Aaron Koblin (American, born 1982), and
Andrea Vaccari (Italian, born 1983)
Yahoo! Design Innovation Team (USA, est. 2005)
Research advisors:William J. Mitchell (Australian, born 1944), Massachusetts
Institute of Technology, and
Saskia Sassen (Dutch, born 1949), Columbia University
Java and Processing software

Lent by senseable city laboratory, Massachusetts Institute of Technology
Sponsored by AT&T
New City. 2008
Peter Frankfurt (American, born 1958), of Imaginary Forces (USA, est. 1996)
Greg Lynn (American, born 1964), of Greg Lynn FORM (USA, est. 1994)
Alex McDowell (British, born 1955), of Matter Art and Science (USA, est. 2001)

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Three-dimensional soundscape composition provided by Martyn Ware for Illustrious Company
Stock footage provided by Thought Equity Motion
Film contribution provided by Neutral London, Christian Grou, and Tapio Snellman
Technical visualization provided by Proof, Inc.
Exhibit technology consultation provided by Show & Tell Productions, Inc.
Media engineering assistance provided by Laird Nolan and Mike Fabio
Video-encoding and playback equipment provided by Kollins Communications
Additional support provided by David Heyman

Cabspotting. 2005-ongoing
Eric Rodenbeck (American, born 1970), Michal Migurski (Polish, born 1977),
Stamen Design (USA, est. 2001)
Flash ActionScript, Processing, and Python software

Lent by Stamen Design
A project of the Invisible Dynamics initiative at the Exploratorium in San Francisco
Produced by Peter Richards and Susan Schwartzenberg
Directed by Scott Snivve with the creative consultation of Amy Balkin
Data generously provided by Yellow Cab of San Francisco
Supported by a grant from the National Foundation for the Arts

Architecture and Justice from the Million Dollar Blocks project. 2006
Laura Kurgan (South African, born 1961), Eric Cadora (American, born 1962),
David Reinfurt (American, born 1971), and Sarah Williams (American, born 1974)
Spatial Information Design Lab (USA, est. 2004), Graduate School of Architecture, Planning and Preservation, Columbia University (USA, est. 1881)
ESRI ArcGIS (Geographic Information System) software

Courtesy Spatial Information Design Lab, GSAPP, Columbia University
Images by Spatial Information Design Lab, GSAPP, Columbia University
11 VISUALIZATION

Mapping the Internet. 2003
Barrett Lyon (American, born 1978)
The Opte Project (USA, est. 2003)
Opte software

Courtesy Barrett Lyon, The Opte Project
Image by Barrett Lyon

Protein Homology Graph. 2004
Edward Marcotte (American, born 1967), and
Alex Adai (American, born 1976)
Center for Systems and Synthetic Biology (USA, est. 2003),
The University of Texas at Austin (USA, est. 1883)
Large Graph Layout (LGL) software

Courtesy Edward Marcotte
Image by Alex Adai

Walrus graph visualization tool. 2001-02
Young Hyun (American, born 1973)
Cooperative Association for Internet Data Analysis, San Diego
Supercomputer Center (USA, est. 1997),
University of California, San Diego (USA, est. 1960)
Java and Java3D software

Courtesy University of California, San Diego
Image by Young Hyun and Bradley Huffaker

Lisa Strausfeld (American, born 1964), and
James Nick Sears (American, born 1980)
Pentagram (UK and USA, est. 1972)
Illustrator, Acrobat, and Processing software

Courtesy Pentagram Design
Images by Pentagram Design
Flight Patterns. 2005
Aaron Koblin (American, born 1982)
Department of Design | Media Arts (USA, est. 1994),
School of the Arts and Architecture at University of California, Los Angeles
(USA, est. 1966)
Processing, Maya, and After Effects software

Lent by Aaron Koblin

TextArc. 2001
W. Bradford Paley (American, born 1958)
Digital Image Design Incorporated (USA, est. 1982)
Java software

Lent by W. Bradford Paley
Sponsored by Canon

History Flow. 2003
Fernanda Bertini Viégas (Brazilian, born 1971), and
Martin Wattenberg (American, born 1970)
IBM Thomas J. Watson Research Center (USA, est. 1961)
Java software

Courtesy Fernanda Bertini Viégas and Martin Wattenberg
Images by Visual Communication Lab, IBM Research

Thinking Machine 4. 2003-04
Martin Wattenberg (American, born 1970), and
Marek Walczak (British, born 1957)
MW2MW (USA, est. 2001)
Eclipse and Processing software

Lent by Martin Wattenberg and Marek Walczak

Hypothetical Drawings about the End of the World. 2006
Demetrie Tyler (American, born 1973)
Interactive Telecommunications Program (est. 1979),
Tisch School of the Arts, New York University (USA, est. 1965)
Processing software

Courtesy Demetrie Tyler
Image by Demetrie Tyler
isometricblocks. 2002/2004-05
Ben Fry (American, born 1975)
Aesthetics + Computation Group (est. 1996),
MIT Media Laboratory (USA, est. 1980)
Processing software

Courtesy Ben Fry
Image by Ben Fry

Humans vs. Chimps. 2005
Ben Fry (American, born 1975)
Processing software

Courtesy Ben Fry
Image by Ben Fry

CodeProfiles. 2002
W. Bradford Paley (American, born 1958)
Digital Image Design Incorporated (USA, est. 1982)
Self-developed software

Lent by W. Bradford Paley