

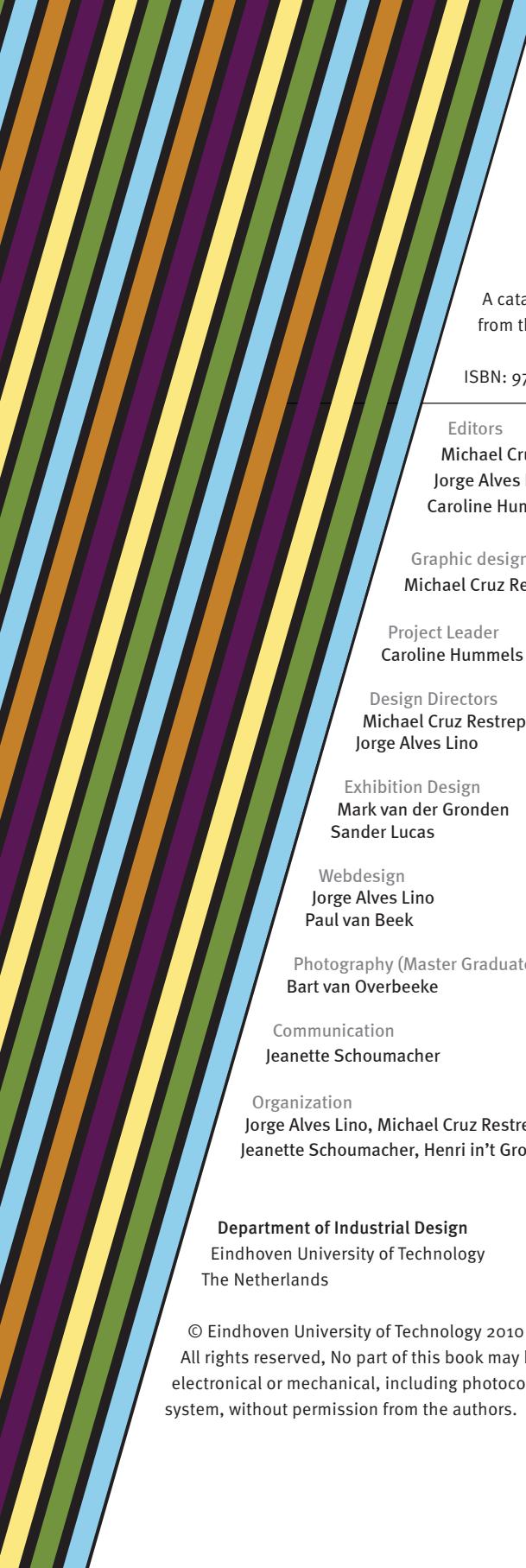
Eindhoven designs

volume four



TU/e

Technische Universiteit
Eindhoven
University of Technology
Where innovation starts



A catalogue record is available
from the Eindhoven University of Technology Library

ISBN: 978-90-386-2379-5

Editors

Michael Cruz Restrepo
Jorge Alves Lino
Caroline Hummels

Graphic design

Michael Cruz Restrepo

Project Leader

Caroline Hummels

Design Directors

Michael Cruz Restrepo
Jorge Alves Lino

Exhibition Design

Mark van der Gronden
Sander Lucas

Webdesign

Jorge Alves Lino
Paul van Beek

Photography (Master Graduates)

Bart van Overbeeke

Communication

Jeanette Schoumacher

Organization

Jorge Alves Lino, Michael Cruz Restrepo, Sonja Joosten,
Jeanette Schoumacher, Henri in't Groen, Caroline Hummels

Department of Industrial Design

Eindhoven University of Technology
The Netherlands

© Eindhoven University of Technology 2010

All rights reserved, No part of this book may be reproduced or transmitted in any form or by any means, electronical or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission from the authors.

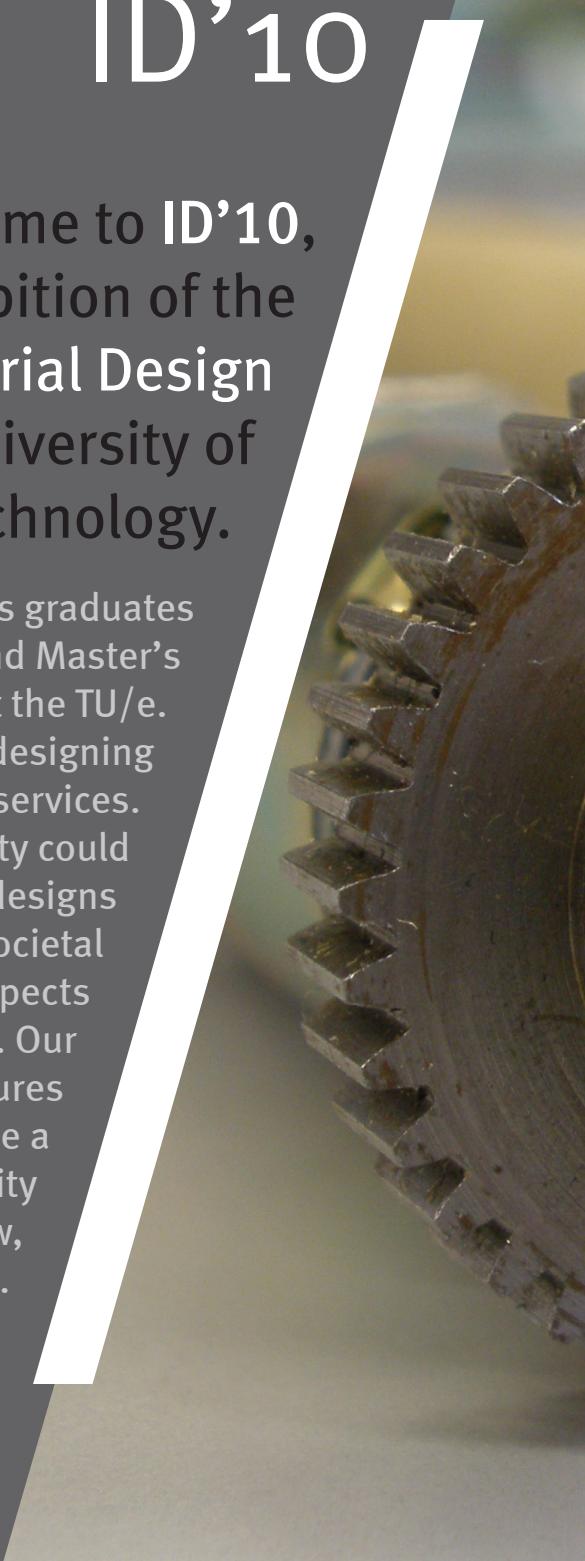
ID'10 Eindhoven Designs, *volume four*

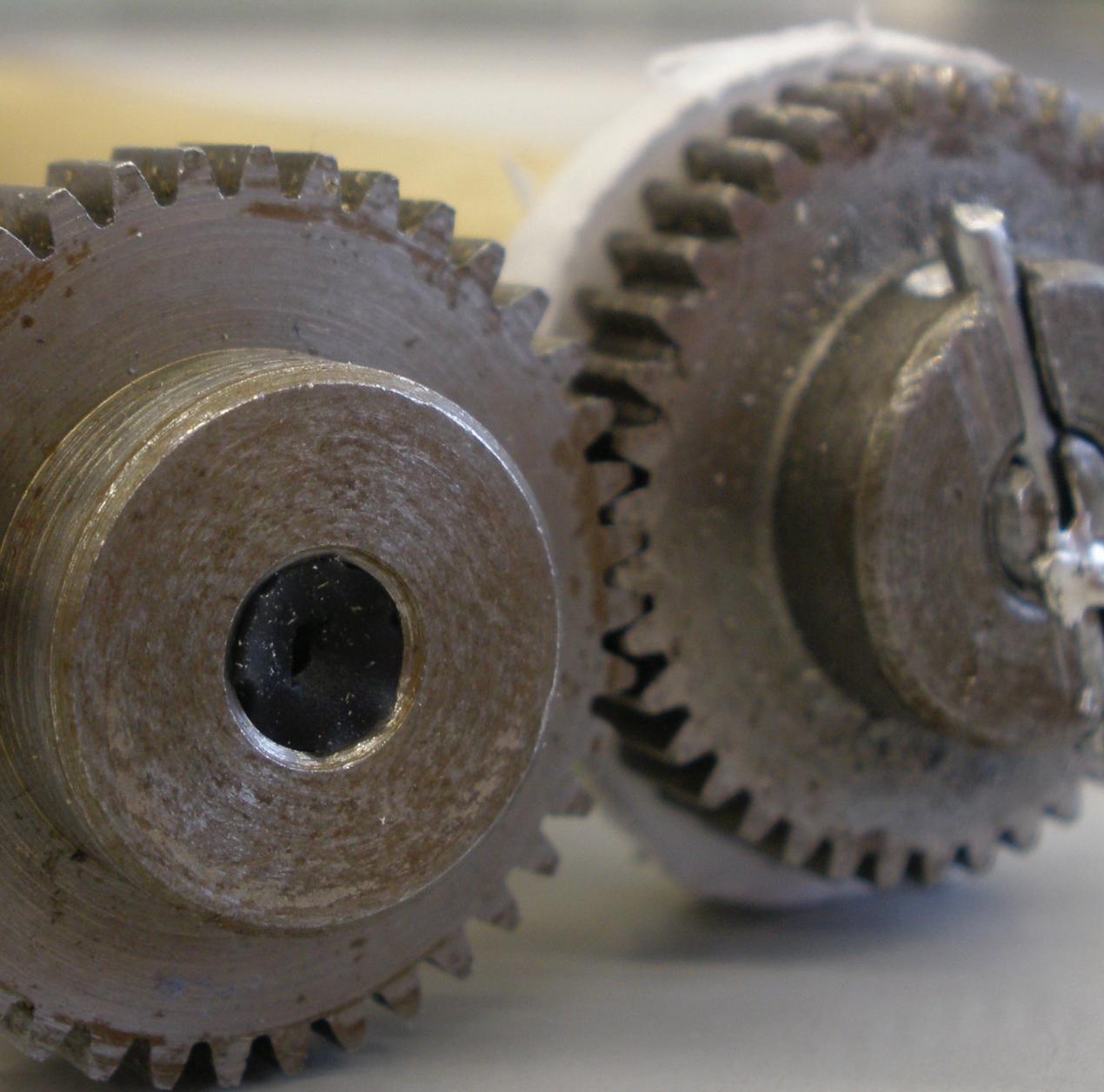
Experience your future through ID'10

Welcome to ID'10,
the yearly exhibition of the
Department of Industrial Design
at the Eindhoven University of
Technology.

ID'10 shows the work of the Master's graduates plus a selection of Bachelor's and Master's projects from Industrial Design at the TU/e.

Industrial Design focuses on designing intelligent systems, products and services. Experience at ID'10 what our society could be like in the (near) future. The designs are based on new technologies, societal trends, user studies, business aspects and new forms of interaction design. Our close relationship with industry ensures that this design vision can become a reality. ID'10 gives you the opportunity to experience this new reality now, through interactive prototypes.





What will your world look like?

ID'10 addresses a variety of **topics**:

Societal transformation

Addressing and developing skills

Health and Wellbeing

Blurring the real and the virtual

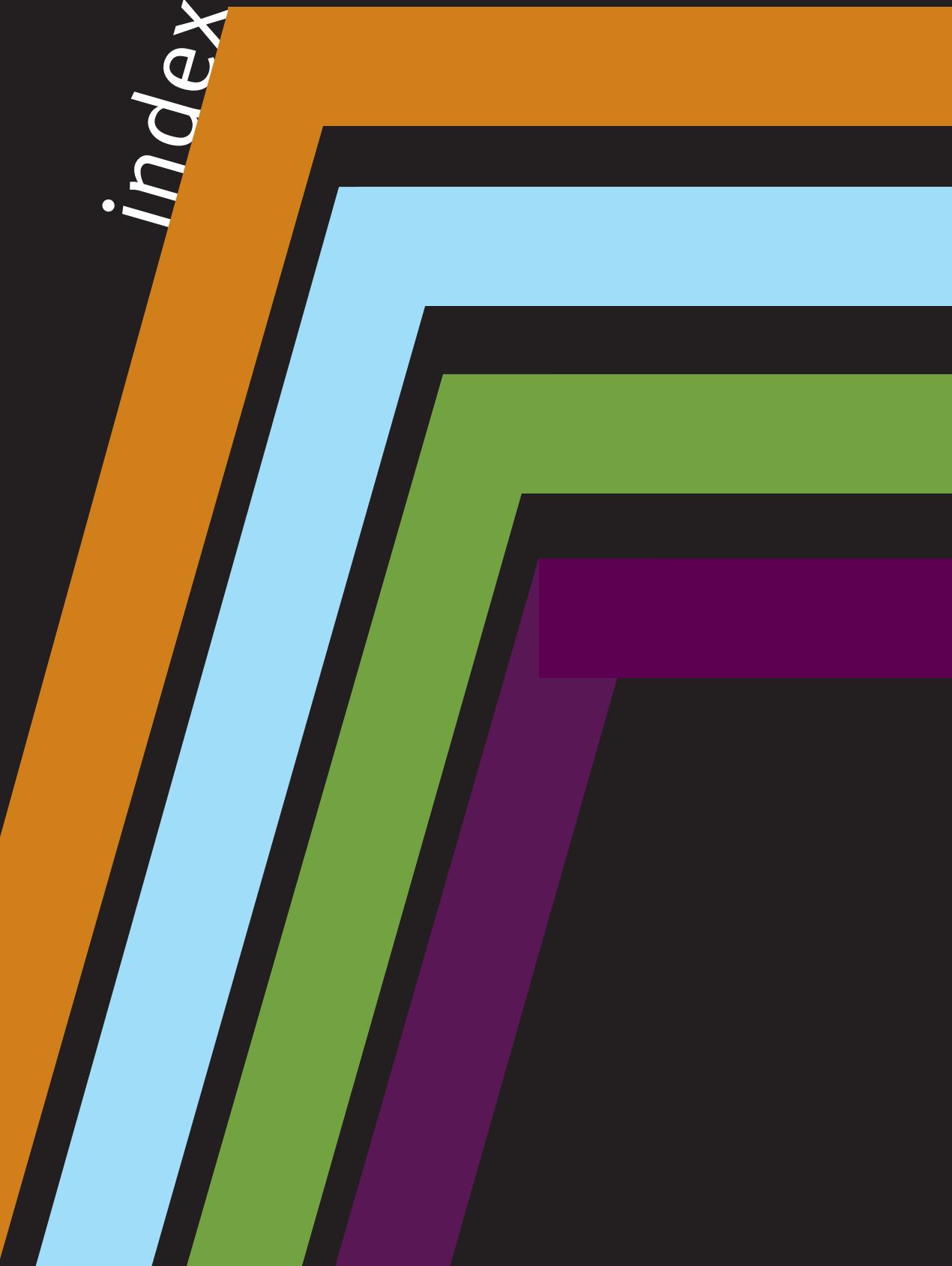
Communication

Learning

Valorization



• index



pages

Industrial Design

...on the topics

10-21

Master Graduates

22-37

Highlights

Bachelors and Masters Projects

38-55

Creating a new society

Keep an Eye Design Award

56-59

Industrial Design

...on the topics

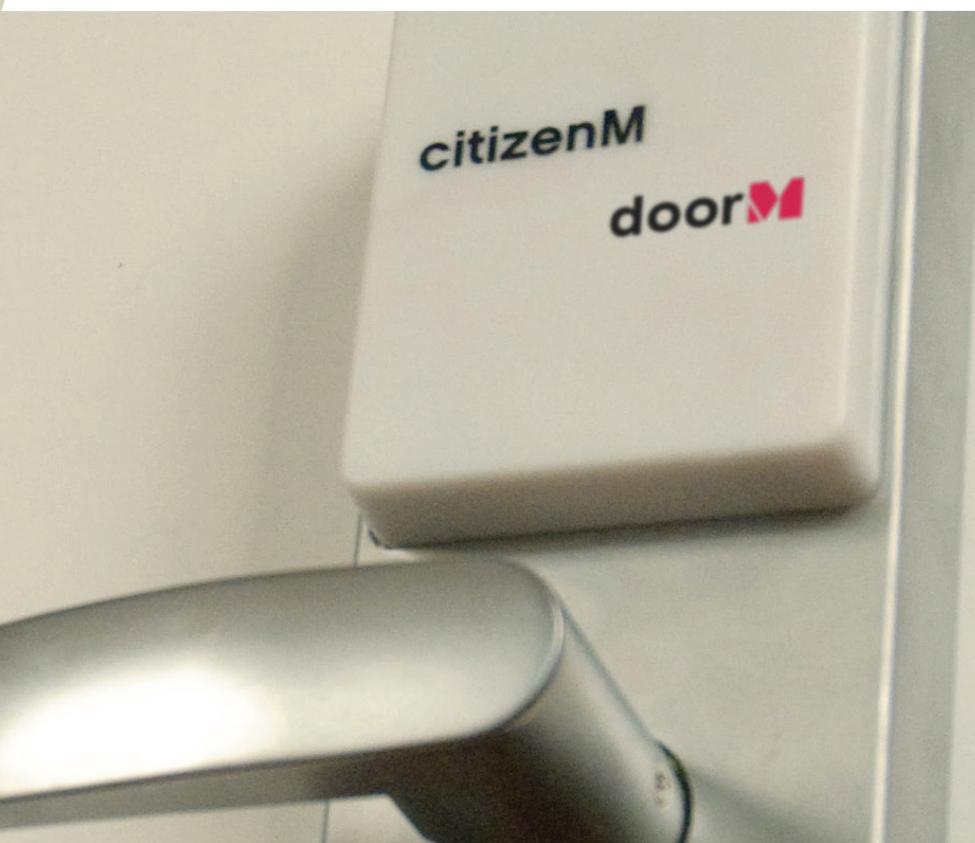


Societal transformation

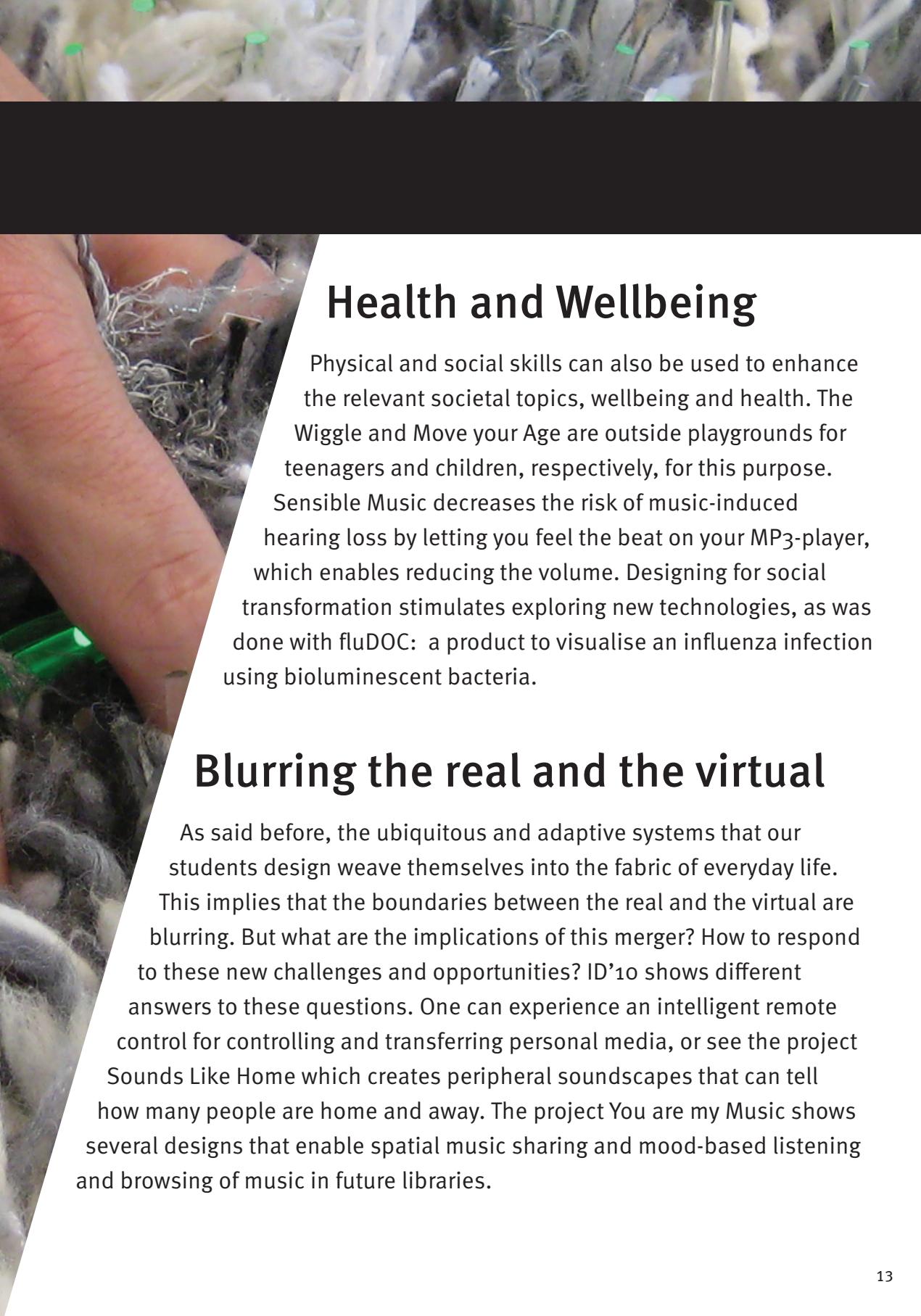
Only a few decades ago, design was geared to mechanical and electronic mass production. We are now in the middle of a transfer towards customised, ubiquitous and adaptive systems, which anticipate our needs and weave themselves into the fabric of everyday life (Aarts et al, 2002; Weiser, 1995). Looking at current technological developments, which even move towards nanotechnology, it seems that the sky is the limit for designers. Therefore, our students do not only have to develop the next generation of (digital) systems, products and services, but also discuss in a social context what kind of life and society these products can or should support. Several projects at ID'10 discuss our current societal structures and explore new systems that transform (the values of) society. For example, the Eco Currency project conducts an inquiry into balancing environmental and economic ecologies, and the Keep an Eye project explores the possibility of "creating a new society" in which all generations are valued and needed, and in which the elderly are not caught in social isolation after their retirement.

Addressing and developing skills

Transforming the lives of people, the way we act in the world and the way we experience the world is a key element of our education, which is implemented by the students in various ways. What will the world look like when we go beyond using primarily our cognitive skills when interacting with computers, which appears to be our current default mode with all these menu structures? How can we interact with a digital world while making use of the subtlety of our physical and social skills? ID'10 shows numerous systems and products that become meaningful for us, because they are part of a physical and social world. Projects such as Tactile Texting that exploits the dexterity of the hands to text without having to look at your phone or Spatial Interaction that uses the strength of bodily skills to operate a kitchen tap through gestures. In addition to designing such systems, products and services, Industrial Design also studies underlying principles, such as the aesthetics of movement-based interaction, as was done by Kirsten van der Aalst.





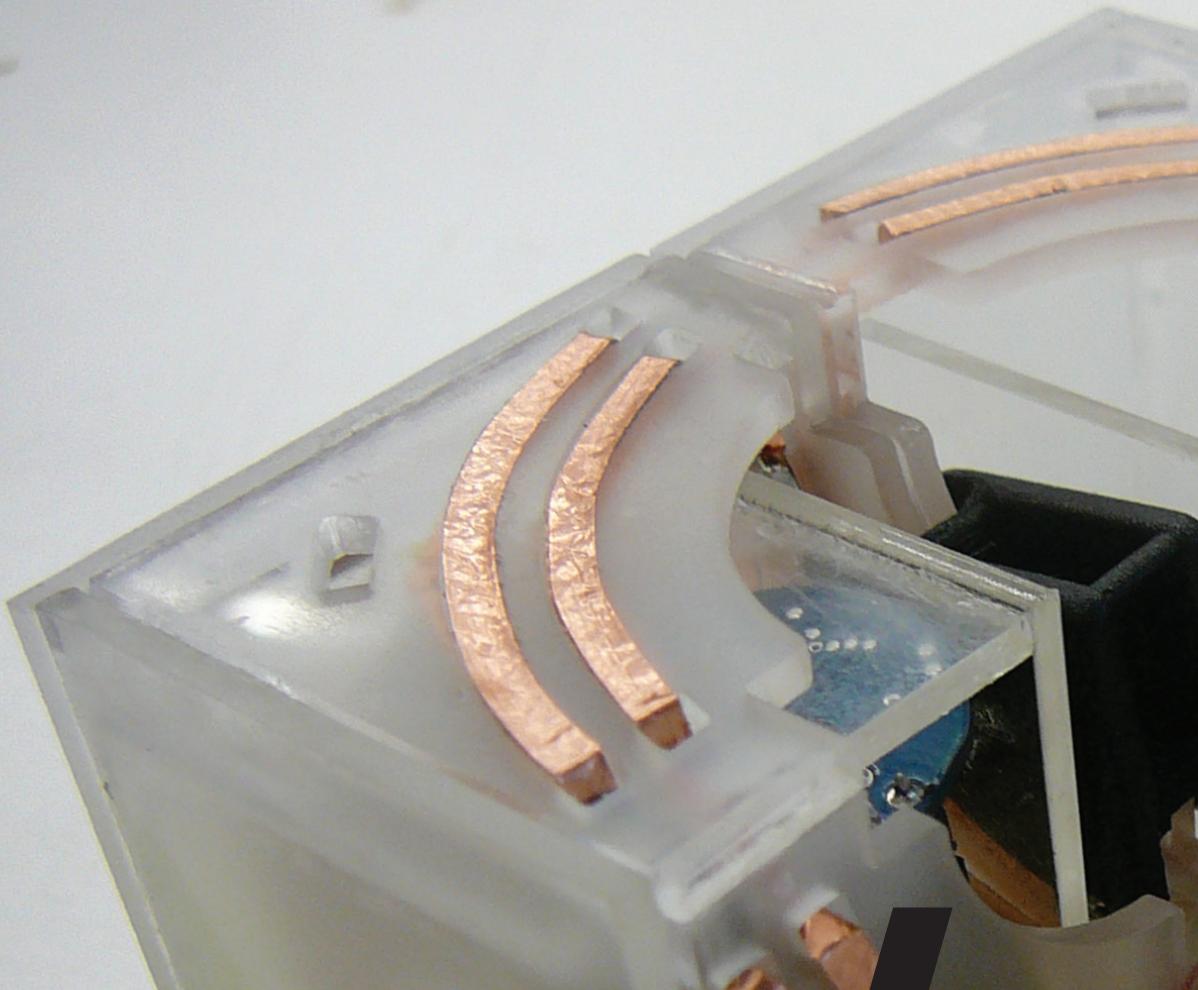


Health and Wellbeing

Physical and social skills can also be used to enhance the relevant societal topics, wellbeing and health. The Wiggle and Move your Age are outside playgrounds for teenagers and children, respectively, for this purpose. Sensible Music decreases the risk of music-induced hearing loss by letting you feel the beat on your MP3-player, which enables reducing the volume. Designing for social transformation stimulates exploring new technologies, as was done with fluDOC: a product to visualise an influenza infection using bioluminescent bacteria.

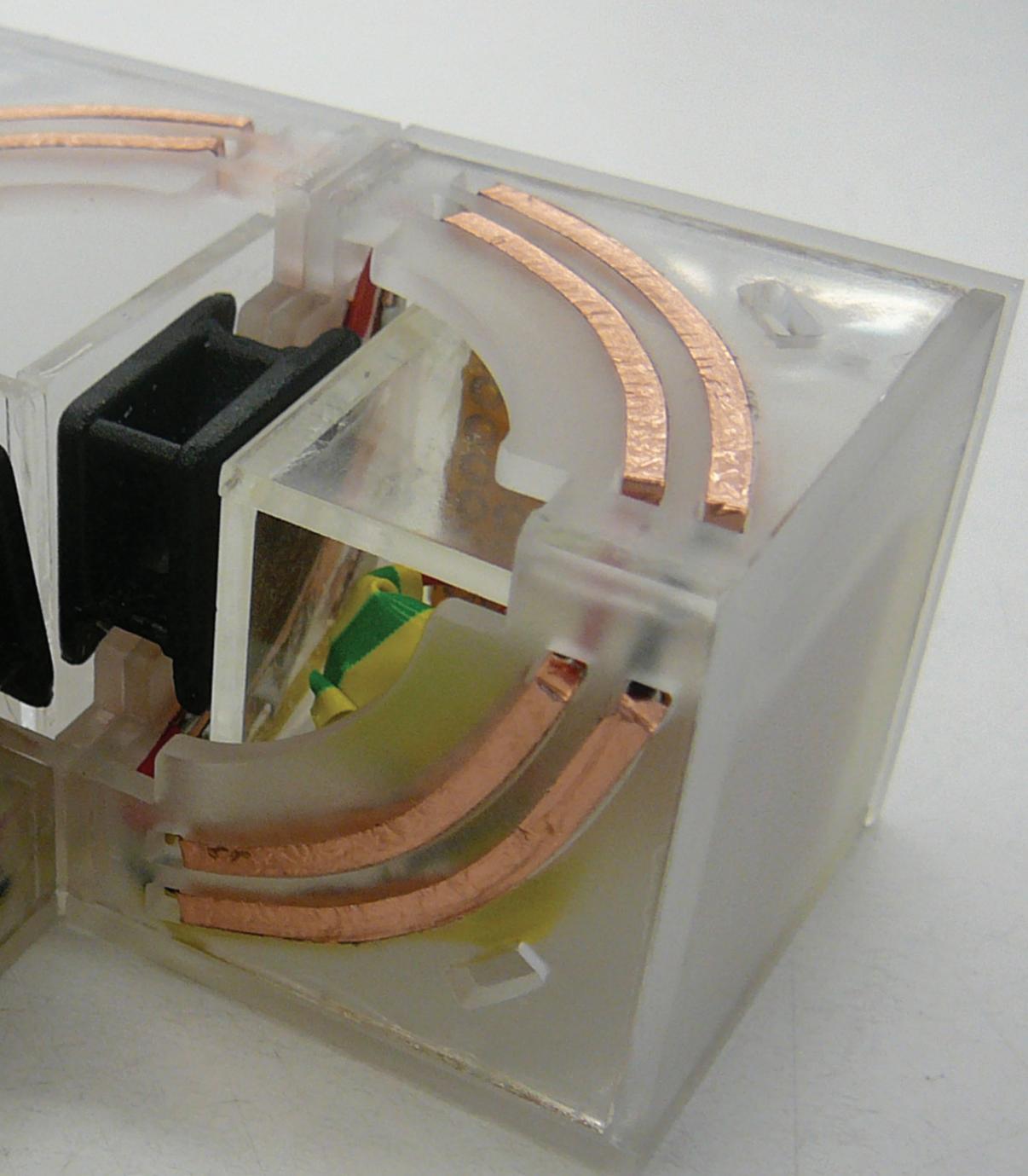
Blurring the real and the virtual

As said before, the ubiquitous and adaptive systems that our students design weave themselves into the fabric of everyday life. This implies that the boundaries between the real and the virtual are blurring. But what are the implications of this merger? How to respond to these new challenges and opportunities? ID'10 shows different answers to these questions. One can experience an intelligent remote control for controlling and transferring personal media, or see the project Sounds Like Home which creates peripheral soundscapes that can tell how many people are home and away. The project You are my Music shows several designs that enable spatial music sharing and mood-based listening and browsing of music in future libraries.



Communication

Another major topic that you can experience at ID'10 is related to communication in a variety of forms. Communication at home between family members as addressed by the projects MOL, Curious Cup, Zhong Zhong and Cueb. Lighting Visitors turns a telephone conversation into a social connection between two environments which merges verbal and non-verbal communication. And a more subtle form of communication between road users, especially motorists, is not a luxury in view of the aggressive behaviour on our motorways nowadays. Again different ways of using design to enhance social transformation.



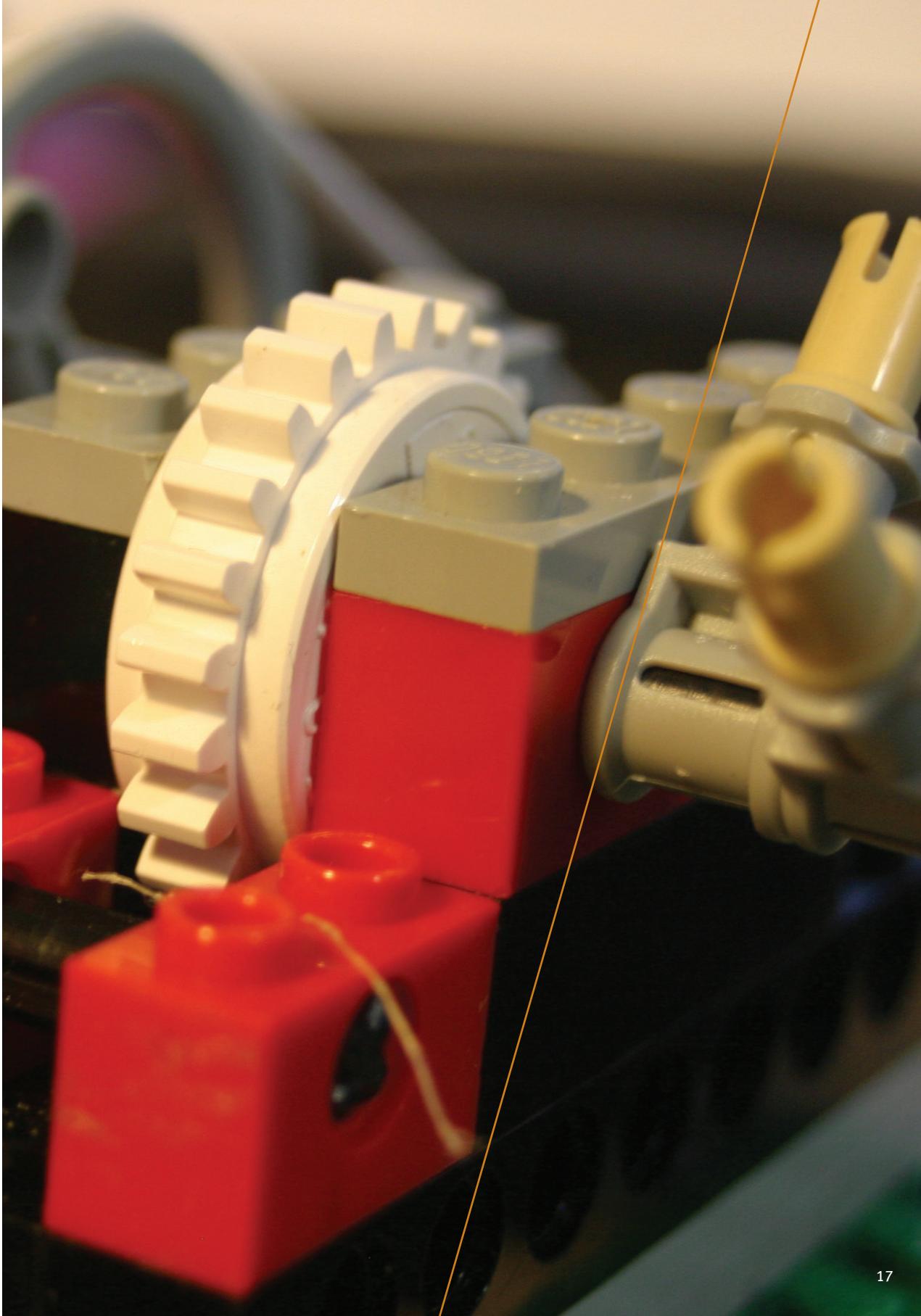
Learning

Being an educational institute, learning is an essential topic for us. The department of Industrial Design has a specific educational approach that supports students to become life-long and self-managing learners. We believe it is important for students to have the ability to learn continuously in order to function effectively in this society which requires the ability to deal creatively and flexibly with large amounts of constantly evolving information.

In our competency-centred self-directed learning model, learning and working are coming together. Students learn to learn (what, how and why) and we facilitate their learning. Attitude plays an important role. Our students develop the ability to reflect, to self-regulate their learning, to take responsibility, to learn from experience and to assess themselves. Our students create their own individual curriculum. At the start of the semester, they select their learning activities, depending on their individual learning needs and in compliance with the ID competence framework we offer (Hummels and Vinke, 2009). During and at the conclusion of learning activities, students reflect on their activities and they invite staff members involved to provide them with (written) feedback on their process and outcomes. At the end of the semester, students create a showcase, which forms the main part of their assessment. In this showcase they demonstrate their development of their overall competence of designing, vision on designing and growth as a designer, underpinned with evidence. At ID'10 you can browse through several showcases to get an impression of our learning process.

Continuous learning is the motor behind many activities, also extra curricular activities. Exploring the boundaries of exhibition design has resulted this year in three interactive Design Rides which you can experience during the Dutch Design Week. Continuous learning also requires continuous testing of prototypes in the real world and reflecting upon the results. Therefore, ID'10 is highly experiential, with many working prototypes.

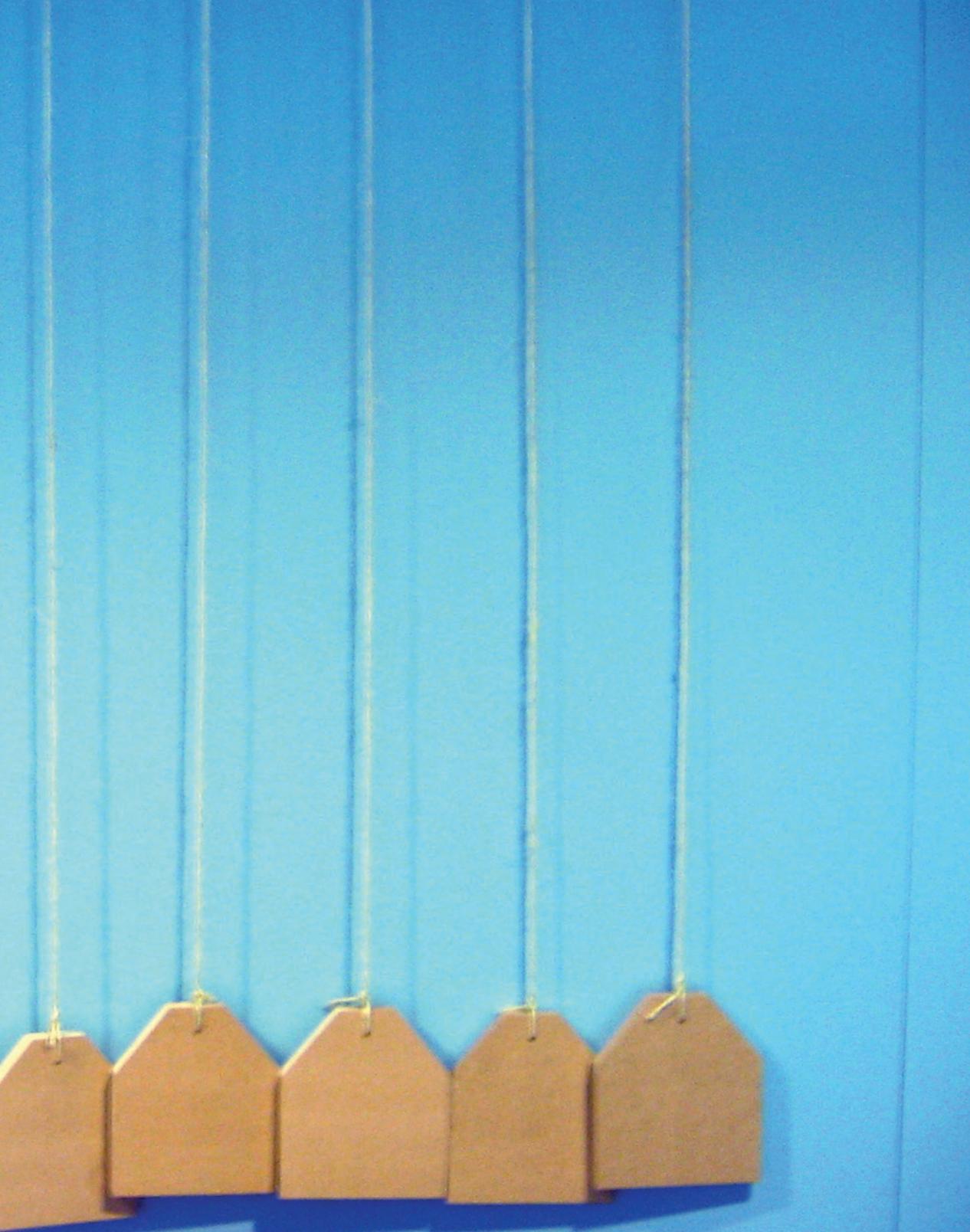
Finally, we do not only develop our own learning model and learning tools, but also develop learning tools for others, such as The TenTiles and CollecTable.



Valorization

Although Industrial Design focuses on innovative systems, products and services that transform society, this doesn't mean that these designs stay conceptual and 'futuristic'. Students are also looking at the commercialization of these designs, by developing total concepts including services, as seen in the Make it Snappy project, or by designing a business case for products, such as a business case for SmartGoals which has resulted in the company Spinnov BV that aims to bring SmartGoals to the market.









This introduction gives you an impression of the kind of topics ID'10 addresses. When experiencing ID'10 you will certainly see more relationships and topics. Which leaves me with one final question: "How can Industrial Design change your world?" Come and experience it yourself. We are looking forward to meeting you at **ID'10!**

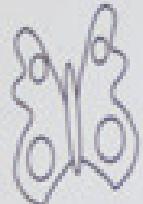
Caroline Hummels



Master Graduates

Photography by Bart van Overbeeke

Tuesday



7.04



7.04



7.09





by Tom Frissen
coach: Joep Frens

Client: Loewe

An intelligent remote control for controlling and transferring personal media

This project aimed at finding new and better control and interaction possibilities for home entertainment systems. Through a wide range of research and explorations a personal remote control has been developed for controlling and transferring media throughout the complete house. Wireless technology enables the remote control to know what devices are nearby and through this it can adapt its control and interaction possibilities. Because it is a personal remote control, every family member now has a personal access point to his or her media.



by Jasper Dekker
coach: Lucian Reindl

Touch-less interaction for a kitchen tap

The goal of this graduation project was to design gestural interactions for a kitchen tap and design and build a fully functioning tap accordingly. Every hand-gesture one performs has a certain meaning. This - often culturally determined - meaning can be coupled to the meaning of functions of products we use everyday, such as a kitchen tap. The touch-less nature of this interaction offers an added value to this kitchen tap as dirt and bacteria can no longer be transferred from our hands.



fieldback

by Sjef Fransen

coach: Pierre Lèvy

Clients: Innosport, Ortec, KNHB,
Virtual Hockey Academy and MHC Oranje Zwart

System for video analyses on the hockey pitch

The Fieldback system provides clear, direct and valuable video feedback on players' performances on the field and during training. The analysis consists of live video footage combined with pre-recorded footage from multiple angles and occasions. This enables the trainer to show and compare previous performances and communicate his comments clearly. The system uses standard video and presentation equipment that can be adjusted to the trainers' preferences.



by Chris Heger

coaches: Aarnout Brombacher,
Mark de Graaf

Capturing the football market with interactive dynamic training

This project focused on the creation of a business case for SmartGoals. How can my idea, interactive goals for dynamic training, be placed in the market? Aspects covered in this project are: an analysis of the football market, the formulation of a value proposition, the mission and vision of the company, intellectual property aspects, sales and distribution strategies, etc. Together with my partners Sjef Fransen and Mark de Graaf and with the support of the TU/e, STW, PSV Eindhoven and Incubator 3+ we have now started the company Spinnov BV that aims to bring SmartGoals to the market.

a camera for serious amateurs

by David Menting
coach: Joep Frens

A camera that helps amateur photographers gain creative control

This camera helps beginners in photography understand and use the parameters shutter speed, aperture and ISO. By literally making these important parameters tangible and inviting the photographer to experiment, the photographer quickly learns how to exploit the creative aspects of photography. Aperture, shutter speed and ISO can be controlled using wheels with textures that change with different settings. By playing with finger positions, controlling the camera becomes a dialogue between the photographer and the camera, effectively stimulating the learning process.





by Stefan Zweegers
coach: Joep Frens
client: De Nationale Hoorstichting

Experience music in a new and safer way with **Sensible Music**

Sensible Music creates new ways to experience music on your MP3-player. Feel the beat and get lost in the music! The music appears to be louder while the actual volume is lower. The risk of music-induced hearing loss decreases while the pleasure increases.

Sensible music



flash +

by Tom van Bergen
coach: Jacques Terken

client: Connect & Drive

A concept designed to enrich the communication between road users

Flash++ is a standalone system that enables drivers to communicate informal messages (which are currently conveyed through headlight flashing) to other road users in a clear and understandable manner, hereby reducing frustration and aggression on the road. The system utilizes daytime running lights, extended with colours and animations, to communicate a number of common messages through naturally mapped light signals. The driver can send messages simply by saying what he wants to communicate and the car will automatically send out the corresponding light signal. A fully working prototype was created and implemented into an existing car for validation purposes.



by Kirstin van der Aalst
coaches: Caroline Hummels,
Michael Cruz Restrepo

How can a product stimulate a behavior change in the user?

This design-research project investigates the movements and possible role changes during interaction with a product. Several prototypes were built. The lighting behavior in these prototypes was influenced by the movements of the user. In the exhibited prototype, three different light behaviours stimulated a different movement behavior and thinking of the user. The project resulted in a set of guidelines for designing intelligent lighting systems by integrating movement principles in the design.



curious-action

by Rob Tieben

coaches: Tilde Bekker,
Ben Schouten

client: PlayFit Project

Design-research on eliciting repetitive curiosity in public spaces

The aim of this project was to elicit and analyse repetitive curiosity. Six interactive loudspeakers were developed. The loudspeakers respond to passers-by using sound output, thus eliciting repetitive curiosity. The findings of the project resulted in design guidelines and a framework. This project was a first exploration for the four-year PlayFit project, which studies activity motivation through gaming elements.



by Connie Golsteijn
coach: Elise van den Hoven

client: Client: Centrum voor Jeugd en Gezin,
Sittard-Geleen en Lumens groep Eindhoven

Cueb is an interactive photo device that facilitates parent-teenager communication

This project aimed at facilitating parent-teenager communication about the parents' past. The final concept, called Cueb, is an interactive digital photo medium which allows parents and teenagers to explore individual and shared experiences, thus triggering an exchange of stories. Through interactive controls like shaking and connecting cubes and by transferring and locking photos, surprising photo results are displayed to trigger memories. Cueb was evaluated in four families. The evaluation showed that the concept triggered and facilitated sharing experiences and telling stories significantly better than a more traditional photo medium.

Cueb

tactile texting



by Guust Hilte
coach: Renè Ahn

Texting without having to look at your phone

The prototype enables people to input text in touch-screen based mobile phones without having to look at the screen. The text input is done using one hand only. By moving your thumb through 'gullies' you can 'write' a character. By pushing down a button on the back of the prototype, the character is sent to a mobile phone via bluetooth. In this way you can input text while using your other hand and your sight for other activities, like cycling or walking.



by Jan van der Asdonk
coach: Koert van Mensvoort

fluDOC

fluDOC visualizes an influenza infection using bioluminescent bacteria

fluDOC is an innovative product using bioluminescent (light-emitting) bacteria.

These organisms are genetically modified to a specific sensitivity towards the influenza virus. The product is loaded with a capsule filling two compartments.

One of these comes into contact with the sampled saliva, the other acting as a reference indicator. Within 15 minutes the bacteria from the inner compartment will die in the presence of the virus. Ultimately, this creates an accurate diagnosis of the virus and provides the user with the chance to prevent further contagion of their surroundings, not only from influenza, but also more distinctive pandemic-related viruses.

curious cup



by Patrizia Cacciapuoti

coaches: Kees Overbeeke,
Pierre Lèvy

Enhancing social interaction by playfully sharing experiences in different contexts

The context of this project is the everyday life of Japanese children. The product is part of the home and school environment. It is a standalone device, therefore it does not require extra devices to function. Curious Cup charges using green energy, a dynamo based on a pulling system allows the user to charge the device at any time. The dynamo system and the stand-alone characteristic allow the user to take the device anywhere he wants. This gives the child the opportunity to take the device to the park or the zoo, to any place where he has interesting experiences that he wants to collect.



by Dirk Gooren
coach: Marco Rozendaal

Lighting visitors: Having remote visitors in your local context

Telephone conversations often occur in social settings, such as a living room, office environment or on a train. Lighting Visitors does not only connect primary users with each other, but also takes bystanders into account. This telecommunication system will enable social connectedness between two environments, give awareness of the remote communication to bystanders and elicit multi-user communication (more than two persons). The design merges verbal and non-verbal communication by placing the sound and light sources in the object. The light communicates whether someone is sitting on the couch as well as the position of the person.



Highlights

Bachelors and Masters Projects

j.j.c.wijnen@student.tue.nl

Coach: P. Rijnbout

Jelle Tuinhout
Paul Groenendaal
Lotte van de Leur
Panizad Saremi



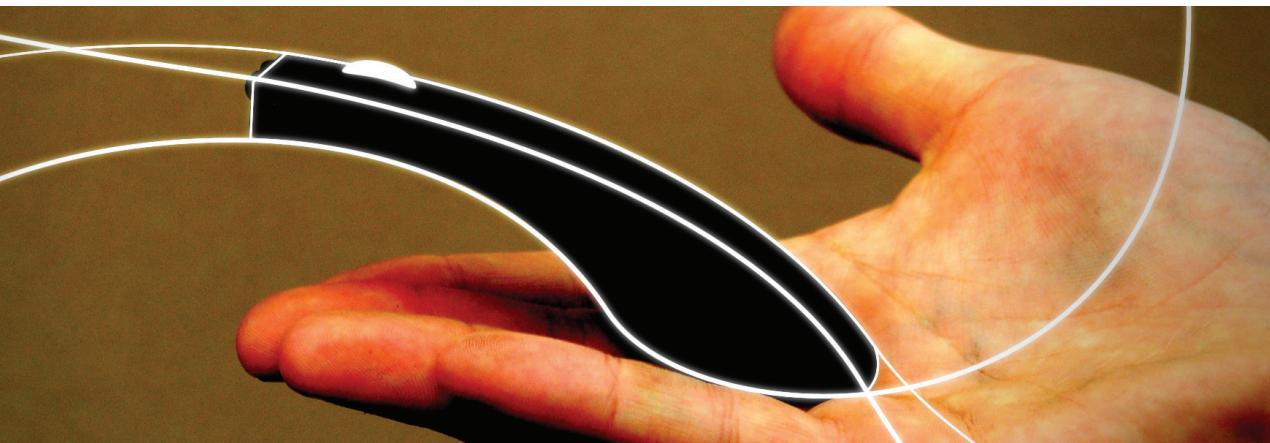
tenTiles

by Sebastiaan Alferink, Stijn Hunfeld,
Robin van Kampen, Koert Mulders
(bachelor: 1st year)

The TenTiles presents mathematics in a visual and dynamic way to children

Mathematics is an abstract learning subject, which makes it a difficult subject to many children. The TenTiles presents mathematics in a visual and dynamic way to children, which helps children in understanding this abstract subject. Children in the first two years at primary school are very active and often find it difficult to stay concentrated for long periods of time. In order to improve children's concentration, they need to do something different; children need an outlet for their energy. The TenTiles provides an opportunity for this.

coach: Kees Overbeeke



motion-control presentation remote

by Hugo Romer
(bachelor: 1st year)

Remote control for presentations, developed with emphasis on shape and interaction

The emphasis in this project lay primarily on shape design within the (re)design cycle. We employed isolation foam for intensive 3-dimensional 'sketching'. The final product is a remote control for slide-show presentations. The product is not only novel in its design: The interaction during the change of slides was also redesigned. Where you would usually press a button to go to the next or previous slide, now you just make an intuitive sweeping motion in order to switch presentation slides.

coach: Maurits de Koning



fluffy

by Luke Vink,
Pieter Oosterwijk
(bachelor: 1st year)

An enviromotive robot that desires nature

Conventionally, robots are separated from nature by mere description. As the goal of our project was to develop an emotional robot, we decided to add a layer of environmental awareness to our robot. The result was Floppy, a children's toy that responds to sunlight, water and the user. Thus, Floppy promotes outdoor activity using emotion and awareness of nature.

coach: Omar Mubin



CIDS

by Dounia Bourjila,
C. Tessa van Doesburg,
Geert van den Boogaart
(bachelor: 1st year)

A decentralized system to bring primary school children together

Children in primary school do not play much together anymore. To stimulate them to play together a decentralized system was developed. A system of multiple "agents" which are all equal, and thus have no leader. One "agent" in itself is pretty simple. But a combination of multiple "agents" causes more complex behaviour. Every "agent" in this system has a colourful LED which expresses its behaviour through patterns. These patterns should challenge the children to build larger groups of "agents", and because of this explore the possibilities together.

coach: Pepijn Rijnbout



zhong zhong

by Philemonne Jaasma, Jacquelyn van Kampen,
Matthijs van Leeuwen, Samantha Peeters,
Zheliuyi Wang
(bachelor: 1st year)

Zhong Zhong encourages children to share with their peers

The one-child policy in China affects society. Children are spoiled and do not learn how to share with others. This first becomes evident in kindergarten. The Zhong Zhong, Chinese for 'a group of people coming together', encourages these children to share with their peers at kindergarten. Every child gets a two-sided tube of which one side is coloured and one side is not. They can give away their own colour and receive other children's colour on the empty side. In this way, they see that sharing is not only about giving away, but also about getting something back, we call it: the joy of sharing.

coach: Gijs Ockeloen



skillfinder

by Neil van Es, Michiel Kersteman,
Berbelijn Lustenhouwer, Tim Scheffer
(bachelor: 1st year)

Finding and sharing skills in a playful manner

What can we do to make the working space more lively, playful and interactive? How will this benefit our general well-being in a social context? One of the biggest problems encountered in an open working space is the search for information and experts. Skillfinder helps the worker find these experts in a playful manner. It is a tool to enhance social cohesion and to reduce the threshold for information sharing. Together we can have fun!

coach: Ben Salem



LEDswim

by Roy van den Heuvel, Bas van Hoeve,
Sharon van der Geest, Koen Beljaars
(bachelor: 1st year)

LEDs in goggles that gives a swimmer heart-rate feedback

LEDswim is a swimsuit which measures heart rate using integrated heart rate sensors. As in most sports, heart rate zones are used in different training sessions. Stamina and aerobic and anaerobic threshold are common training subjects involving heart rate zones. Before a training session, the swimmer selects a heart rate zone. Whenever the swimmer reaches a heart rate that is outside his zone, a little LED lights up inside his goggles. Placed in a non-evasive way, the LEDs give information on whether the swimmer has to increase or decrease his heart rate.

coach: Maarten Versteeg
client: Innosport NL



TIM

by Koen Beljaars, Jelmer de Maat,
Rick Dutour Geerling, Sivaraaj Soundarajan
(bachelor: 1st year)

Tangible interaction device for instant messaging

TIM is a product that makes it possible to bring a part of the interaction with an instant messaging program into the living room. The product provides an overview of all the different contacts displayed as fish in an aquarium. Every fish represents a contact person. The color and the speed of each fish shows the status of that contact (online, away, offline etc.) en whether the contact is sending a message or not. The touch screen provides an intuitive way of interacting with the fish and makes it possible to read the incoming messages and send quick replies.

coach: Christoph Bartneck
client: SOFIA



future shopping experience

by Ken Giang
(bachelor: 2nd year)

Wouldn't it be nice to navigate efficiently throughout a supermarket?

Shopping in a supermarket can be a hassle. Modern supermarkets have more than 20.000 products in the store. Customers often find themselves disoriented, walking back and forth to find a specific product. The Shopping Navigation Module allows customers to shop faster and more efficiently. The Shopping Navigation Module can be attached to the shopping cart and gives directions where to search for specific products. In addition, it alerts customers when they are near promotional products.

coach: Željko Obrenović



collectable

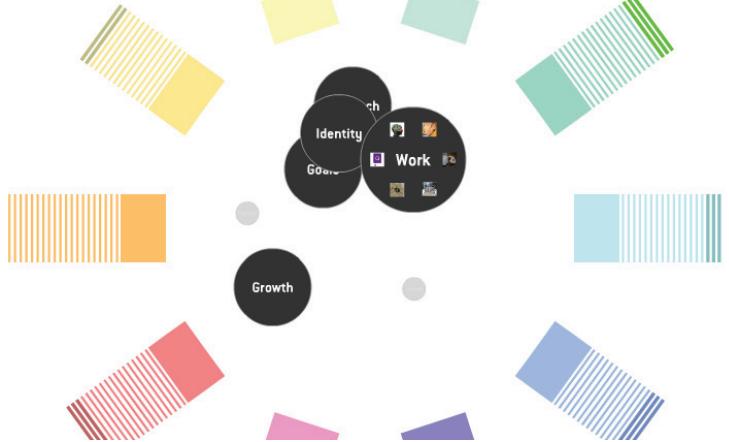
by Tijmen van Gorp, Edwin Meijne,
Wisse Trooster, Alexander Hanssen
(bachelor: 2nd year)

Knowlegde Agoras: A new way of presenting information

Collectable is developed to present results from the faculties of the TU/e. It enables visitors to an exhibition to select information on their interests. The common research posters can be replaced by teasing posters which will persuade the visitors to select them. When the visitor has selected the poster of a certain subject, he can explore more information of his selection at a central point in the exhibition. The system will also enable the visitor to learn more about the researchers and provides information on how to reach them.

coach: Aya Bartneck

client: Information Expertise Centre of the Library at the TU/e



Emin's showcase

by Emin Sinani
(bachelor: 2nd year)

This is the showcase of Emin Sinani

As an industrial designer, I like to create interactive products which are “humane”. I am doing this by looking at the natural values and interactions of people and bring these back into useful and social designs. In this showcase I reflect on the final term of my second year. I have created a playful website where the coloured blocks represent the different competencies of our study. By creating connections between the different parts of the showcase, I hope to tell a clear story of how I have developed.



move your age

by Bob Spikman, Sandra Suijkerbuijk,
Rico Minten, Jorien Kemerink
(bachelor: 2nd year)

A game designed to motivate children to play outside more often

Playing outside is important for children to develop social skills and physical health. Because an increasing number of children watch tv and/or use computers indoors, the number of children who play outside is decreasing. To make playing outside more fun we started focusing on a known, easy-to-understand group game: “musical chairs”. Using a mix of lights and sounds, integrated in musical chairs, we tried to bring the experience of computer games outside. By using different light colours, the design contains a variety of games for the future in outside playgrounds.

coach: Peter Peters
client: TNO, Paul de Vreede 45



wiggle

by Thijs Roumen, Dick van de Ven,
Hanneke Hooft, Peter Brown
(bachelor: 2nd year)

Wiggle is an Interactive playground for teenage girls

The concept consists of 2 parts. An interactive half sphere senses physical balance. It is activated by standing on it or pushing it over. The environment around the half sphere consists of a bench-like structure on which you can sit or slouch. Its circular composition around the half sphere creates a cosy environment in which to have a chat. In this way a mix between active and passive play is facilitated.

coach: Mark de Graaf
client: Kompan; Playful Living



you are your music: PeAk

by Laura Duncker
(bachelor: 2nd year)

'Take a PeAk in someone else's music preference!'

PeAk is a kind of 'shopping basket' that indicates the musical preference of the person that carries it. Based on the cds it contains, PeAk assumes a color corresponding to the location of similar items in the music department of the library. In this way, customers can learn about each other's musical tastes.

coach: Sander Lucas
client: OBA (Public Library Amsterdam)



you are your music: SoundClouds

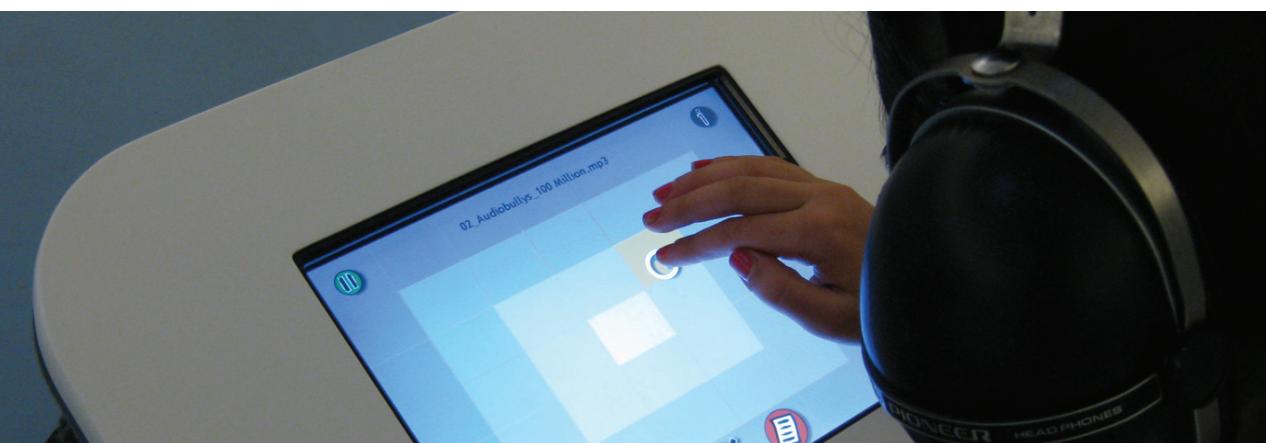
by Joep Kalthoff
(bachelor: 3rd year)

A concept for spatial music sharing in future libraries

SoundClouds is a platform for interaction and music sharing among library users. Visitors are able to manage and play their own music with lamps that are placed in the library space. An invisible cloud (surrounding the lamp) is filled with songs from the user's collection whenever a user starts playing music on a lamp. Other users can listen to and explore these SoundClouds with a pair of headphones. The headphones are connected to a mobile platform that enables the users to save interesting songs for later use, i.e. to lend or buy them.

coach: Sander Lucas

client: OBA (Public Library Amsterdam)



you are your music: Opus4

by Mendel Broekhuijsen
(bachelor: 3rd year)

A mood-based exploring system for listening & browsing music in libraries

Opus 4 is a mood-based music exploring system. It is designed to overcome the existing boundaries between musical genres by providing music recommendation purely based on signal analysis. Used as private listening and browsing device, it inspires the visitors to find music that is on the edges of their musical taste.

coach: Aya Bartneck

client: OBA (Public Library Amsterdam)



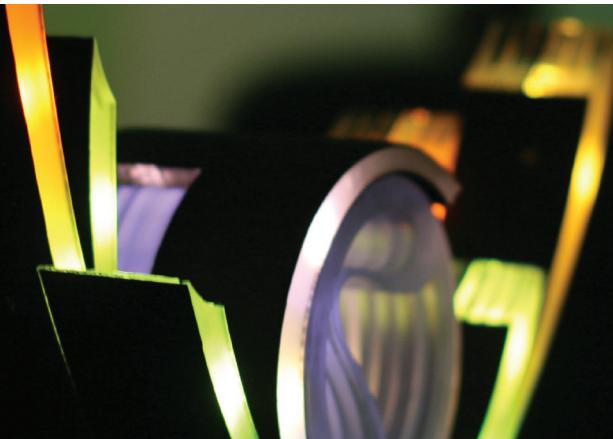
flexo table lamp

by Jasper de Kruiff
(bachelor: 3rd year)

Flexo combines rich interaction with multiple functionalities in a portable table lamp

Flexo is the ultimate embodiment of flexibility in a table lamp and allows users to shape light in a literal sense. Depending on the position of the flexible arms it is either a warm, glowing accent light or a bright, focused desk lamp. This versatility combined with the absence of awkward power cables makes Flexo a lamp to be used anywhere in and around the house. The rich, tangible interaction comes naturally and makes the use of the lamp a remarkable and pleasurable experience. Flexibility in form, function and location – that is Flexo

coaches: Tom Bergman, Jon Mason, Rombout Frielink
client: Philips Research - Visual Experiences



emdis

by Vic van Hensberg
(bachelor: 3rd year)

Complex technology made simple and understandable

Developed with a focus on aesthetics, shape and interaction, EMDIS is a magical and beautiful gateway to and from the environment. It is the embodiment of a responsive environment. It displays the current status of the environment in an abstract and metaphorical way while, at the same time, allowing the user to change and control the environment through simple and natural gestures. Three simple gestures allow anyone to understand and control a complex technological system without any knowledge on how the technology works. Complex technology made simple and understandable.

coach: Ben Salem



adaptive office

by Teun Vinken
(bachelor: 3rd year)

Interactive window shades that stimulate a natural and free experience of office spaces

By creating dynamic shadows inside an office space our modular system blocks direct sunlight from office workers. The aperture of the circle structure varies depending on outdoor light intensity. In addition, the system provides a free and natural office experience. The circular shades provide an outdoor experience in a closed office environment similar to the effect of shadows created by leaves of a tree. This way the sense of being locked-up in the office is reduced and a more pleasant work atmosphere can be created.

coach: Jorge Alves Lino



MOL

by Zaza Zuilhof
(bachelor: 3rd year)

A coat rack enabling family members to leave audio messages

Meet Mol! Mol is a coat rack that supports communication within family households by enabling them to leave audio messages for each other. Often situated in the entrance, the coat rack forms a central point in both our arrival and leaving rituals. Mol extends the natural communication of the coat rack, through presence and absence of coats, with the opportunity to leave audio messages. Mol's interaction scenario is designed to fit the daily arriving and leaving ritual through movement flow and pleasurable interaction.

coach: Simone de Waart 49



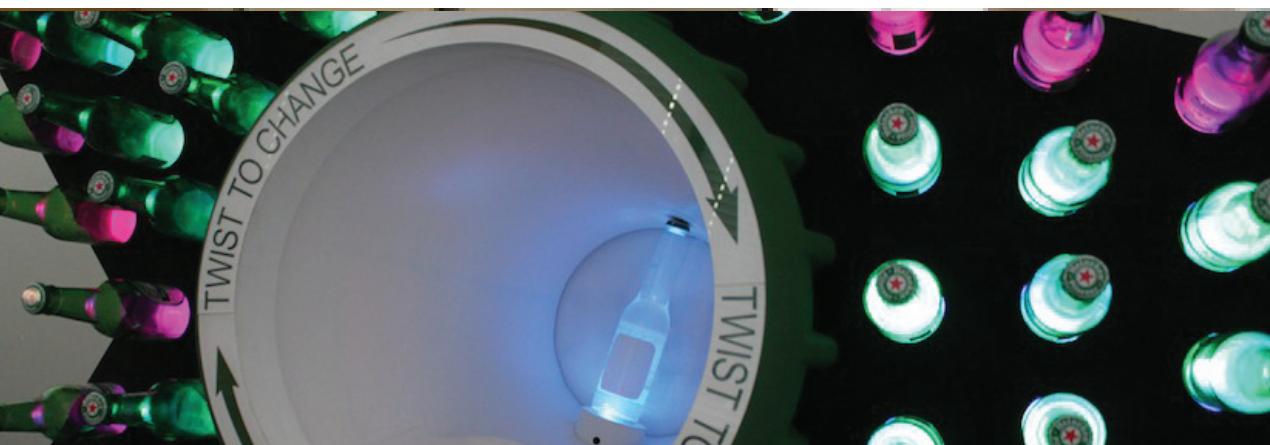
evolving into your avatar

by Sander Bogers
(bachelor: 3rd year)

Blurring boundaries between the real and virtual world through an outdoor game

“Evolving into your avatar” aims to blur the boundaries between the real and virtual world. An outdoor game was designed in which players can pick up weapons placed on several locations in the environment. When attacking other players at a distance, the player control the weapons by moving an umbrella. In these fights players can gain credit which can be used to create bases and capture the city.

coach: Michael Cruz Restrepo



communication:light

by Olaf Corduwener
(bachelor: 3rd year)

An interactive lighting advertisement for Heineken.

A wall of LED-light Heineken bottles, placed in a public space or at a festival, reacts to passers-by and draws their attention. There is a large twist-off beer cap in the middle of the wall, through which a ‘Jouw Heineken Long Neck’ can be seen. Users can customize this bottle on the spot by taking a picture, which is then projected onto the bottle, and choosing a colour pattern. This customization is reflected on the bottle wall by the LEDs, thus forming a personalized Heineken experience noticed by many other bystanders.

coach: Jacob Alkema

When looking at the learning activities this semester, some links can be seen between them. These links represent connections in terms of competency development, study or learning goals. All together there were six links between the fields of development: programming, electronics, model making, visualization, presentation and organization.

Together these fields of knowledge form a balanced competency development which can be seen in the graph.

By clicking on the links while hovering over the activities



Artificial Intelligence Workshop



Industrial Design PR Presentations

Showcase discussions with Caroline Hummels

Programming Arduino and AVR

Electronics Development

Model making

Visualization and sketching

Presenting professionally

Organizing the Exhibitions

Finances and producability

PromoThing Project

Karin's showcase

by Karin Niemandsverdriet
(bachelor: 3rd year)

Nowadays the crux of good design lies in the poetry

In my designs I aim for attachment through physical interaction and change. I want to push constraints and design for innovation, but I want do so in an almost unnoticeable way. My designs should be ambient, fitting into a context and make people question: "Why have we never thought of this before?" In this way my products will form the answer to the indifferent consumption of products. A Karin Niemandsverdriet product might be used almost unconsciously, but always with a smile on your face.



make it snappy

by Madelon de Haas
(bachelor: 3rd year)

Explore the possibilities of combining online services with electronic greeting cards

Electronic Greeting Cards are generally regarded as loud, impersonal and expensive – with poor graphics and cheap jokes. In a world of instant messaging, email, twitter and ping, the surprise of an actual paper card in the mail is strengthened by the personal attention, time and effort it entails. In this project a pop-up technique was used to emphasize that surprise, and limited the role of electronics to merely support the sender's personal message. With the ease of the internet, the makeitSnappy webservice allows its users to design and send original, custom-made greeting cards, anywhere, anytime.

coach: David Morgan
client: Fun Industries 51



LivingMemory

by **Lizette Reitsma**
(master: 1st year)

LivingMemory guides people who lost a dear-one through their mourning process by keeping the memory alive

On important moments in the mourning process the flower starts blooming, serving as a cue for remembering. Such moments can be found in many cultures (where the mourning process is often split into shorter and longer periods by means of rituals) but are lost in Dutch culture. LivingMemory reintroduces these moments. The water at the bottom evaporates, condenses and gathers in a reservoir above the flower. At the special moments the reservoir opens and the flower is watered. Within 3 hours the flower blooms and invites the mourners to reflect on their loss.

coach: *Ronald van Tienhoven*



sounds like home

by **Sebastiaan Pijnappel**
(master: 1st year)

Sounds Like Home creates peripheral soundscapes that tell how many people are home and away

Two glass vases contain marbles, their number equal to the number of members in a family. One vase indicates "home", the other "away". A marble rolls to the "away" side whenever someone leaves, or the other when someone comes home. The sounds of marbles rolling and bumping into each other compose a gentle soundscape from which the number of people home or away can be derived.

coach: *Elise van den Hoven*
client: *Saskia Bakker*



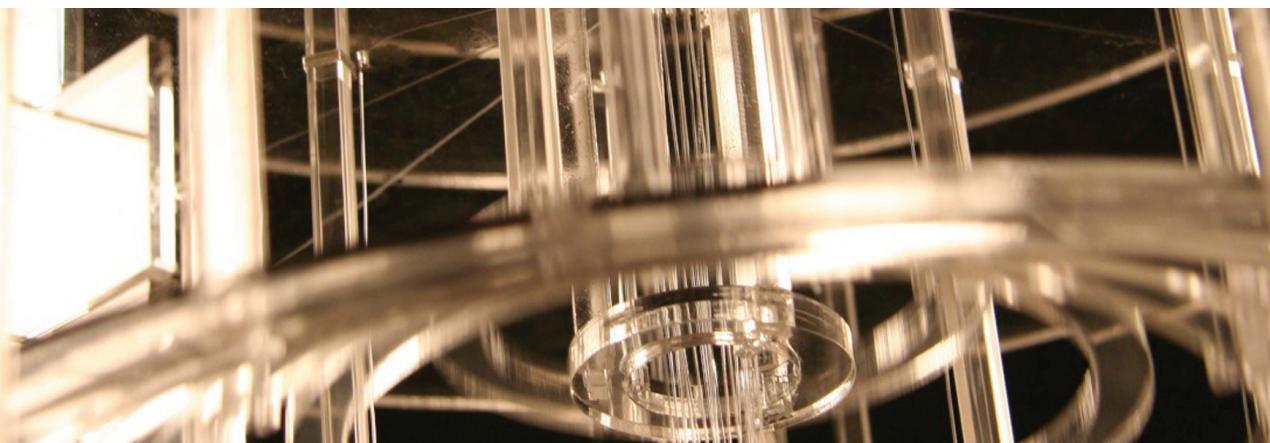
ECO currency

by Marcel van Heist, Jop Japenga,
Billy Schonenberg
(master: 1st year)

An inquiry into balancing environmental and economic ecologies

The starting point for the ECO Currency project is the hypothesis that an important factor in our current environmental crisis is the disparity between economic ecology and environmental ecology. We could address environmental issues by bringing these two spheres together. Eleven research questions have been formulated to investigate the possibilities of such concepts. Several potential answers to these questions lead to different

coach: Koert van Mensvoort
client: Luna Maurer



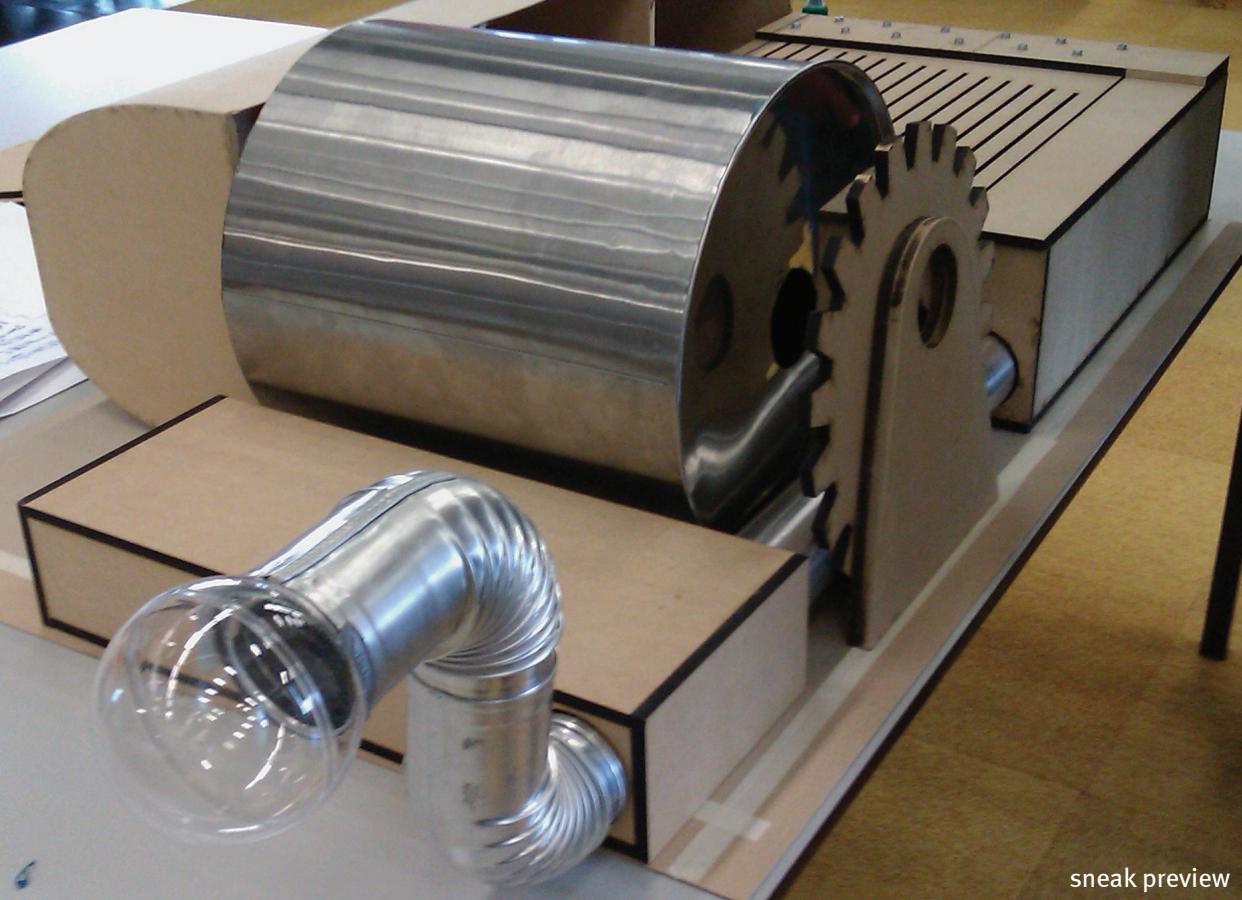
from movement to mechanism

by Jasper Pieterse,
Pakwing Man
(master: 2nd year)

An exploration of movement qualities based on the observation and translation of natural dynamic languages into dynamic form

The original design for the mechanism was based on the thorough qualitative description of the dynamics of a piece of fabric under moving water. Several methods for description and translation were explored in order to understand better the dynamics observed in the world outside of the body. We are currently on our fourth iteration/prototype in which the dynamics of the object are explored with those of light in order to begin to find relationships between both.

coaches: Michael Cruz Restrepo,
Caroline Hummels



sneak preview

Design Rides

Mechanical vs. Digital

by Rudi van de Schoor, Ardjoen Mangré
John van der Slik, Bowling Karapun

Now that we have made quite a lot of progress in technology, it is important to look back at the way products worked in order to get insights, inspiration and find new connections between how things used to work and what technology allows for nowadays. This Design Ride blends the physicality of an old music player with the digital nature of an mp3 player. Take this taxicab and delight the city of Eindhoven with a nice melody.

Capturing the wind!

by Dounia Bourjila
with the support of: Rincke Driessen, C. Tessa van Doesburg,
Ard Jacobs, Stijn Toonen

When it comes to interaction, objects may also have an interplay with the forces of nature and behave accordingly. In this Design Ride, making bubbles is taken to the next level. A grid moves downward and upward while the taxi is in motion in order for the “wall of soap” to be reloaded, allowing for a beautiful trail of bubbles to follow the car through its interaction with the wind.

Cubic puzzle

by Gijs Houdijk, Koen de Greef, Rico Minten

The acrylic puzzle cubes with the steel balls inside has entertained many for years and, this year, it will continue doing so during the Dutch Design Week. This Design Ride will enable visitors to play with such a puzzle installed on top of a taxicab from the backseat of their ride. Via a screen the passengers are able to control the game. The motion of the car creates a challenge for the passengers to complete the maze in time for their next design location. This Design Ride shows a key combination of mechanics, electronics and software that is present in the education at Industrial Design.

coach: Jorge Alves Lino
client: DDW Design Rides





Creating a new society

Keep an Eye Social Intelligent Design Award

A variety of health care projects are using the newest technological solutions to support people getting older and wanting to stay longer at home. Most of these projects however develop solutions that are add-ons to the social fabric of the lives of the elderly. They take their social setting as a given and thus do often not address the factor of social isolation, which is for example enhanced because elderly are no longer a part of our working community. How can we make sure that they are not caught in social isolation at home, or that they feel that they are a burden to the community? This Keep an Eye social intelligent design project explores the possibility of “creating a new society” in which all generations are valued and needed, and in which the elderly are not caught in social isolation after their retirement. The winning design team of the first 3-week module, will receive a grant for the valorisation phase, in which the design is further developed, and if possible made production ready.

coaches: Caroline Hummels
Michael Cruz Restrepo
Kees Overbeeke

client: Keep an Eye Foundation

Sensuous Shell

by Sippe Duisters, Yves Florack,
Ewelina Szymanska, Stephan Hoes

Jewellery to promote communication
between generations through recorded
audio samples.



The familiar social surroundings of elderly people can fall apart as they grow increasingly older, which can create a social divide between them and the rest of society. By means of SENSUOUS jewellery, which will be available in sets with a dock, it becomes possible to share personal thoughts from daily life by recording audio fragments in an intuitive, unobtrusive way. Gathering all jewellery owners and linking all modules together on the dock is the only possible way to listen to the audio fragments. All recorded fragments will be played randomly to provoke new conversations between the users involved.

In stead of exhibiting well-known art, this in-village exhibition reflects the creativity of a small community. By locating the exhibition at a town square, in most cases the dynamic center of the village, it has a central role within the community. Everyone gets the chance to exhibit their work. The exhibitor, who can be any person in the community, has an important role. He will not only showcase his work, but also assigns the next exhibitor by handing him part of the key to his pedestal. The moment when exhibitor and future exhibitor exchange the artwork will become a social gathering involving all layers of the community.



Open exhibition that promotes social cohesion in a small community.

by Luuk Beursgens, Sander Bogers,
Gilles van Wanrooij

Open Up

The Conpetto (the box itself), containing memories of its previous owners, is passed on from one person to the next, every time adding or swapping a memory inside. Online registered owners of the Conpetto can keep track of the box travelling throughout the country and come into contact with its previous caretakers. By monthly e-mail updates they are kept involved in the sharing society and can see if the memory chain they contributed to is still going. By offering material and indication of contact information, users are invited to contact others.



A new self-sustainable social structure based on sharing memories.

by Mark Thielen, Idowu Ayoola,
Rik van Donselaar, Roland Coops

Conpetto, et Memento

Kugida

by Sijme Geurts, Niko van Meurs,
Nicolas Nelson, Manon Spermon

The elderly feel they are needed by cooperating on a play.



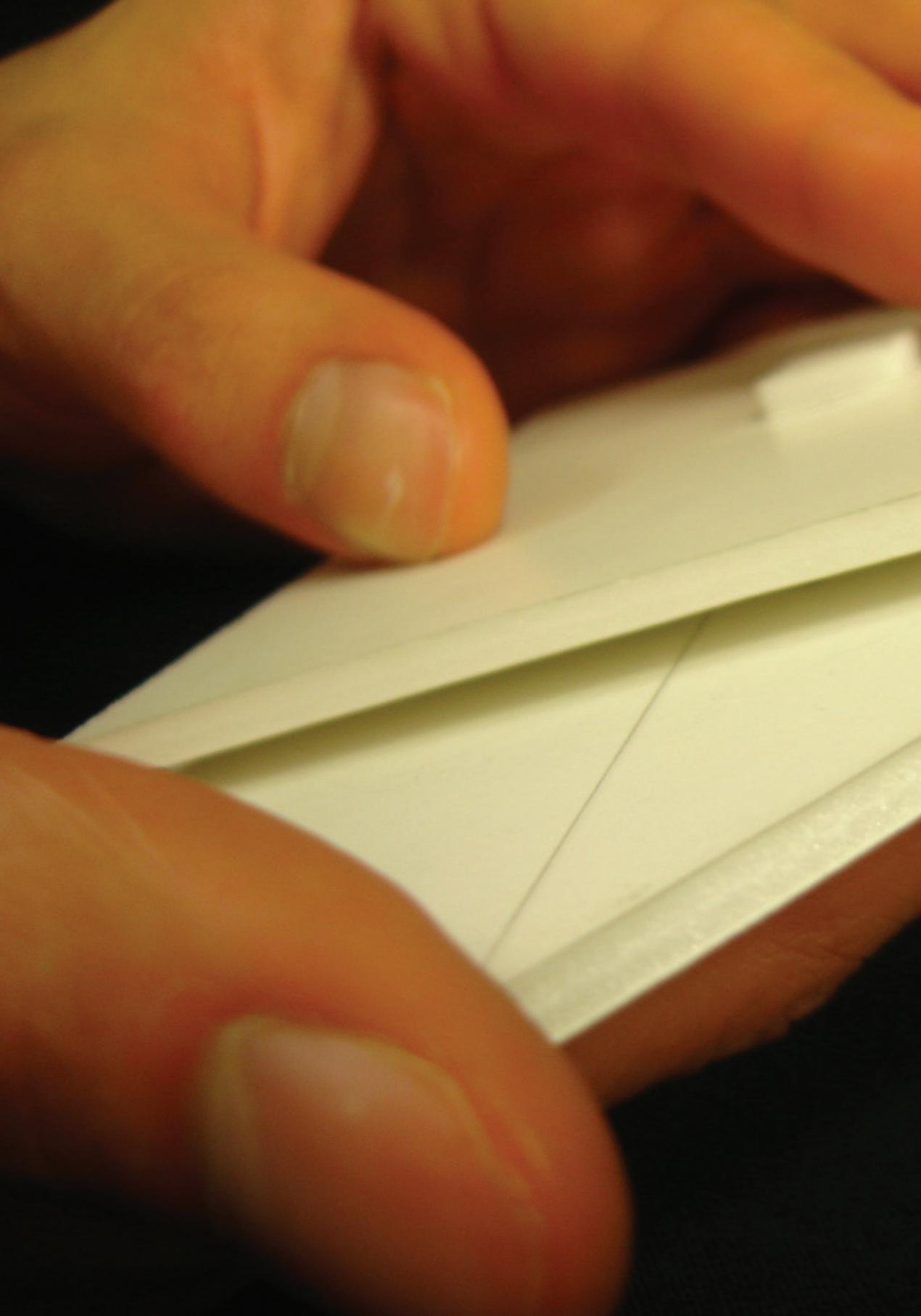
Kugida is designed to give elderly the feeling of being needed in this society by cooperating on a higher aim. This aim is a play, to which they can contribute parts of the script as well as physical matters. The elderly are encouraged to work together and the community centre also plays a significant role. Contributions can be made by placing the cone over an article, drawing or anything one can think of. The content is saved by pressing the button. Categories are made by adding a category card to the scene. Try it yourself, good luck!

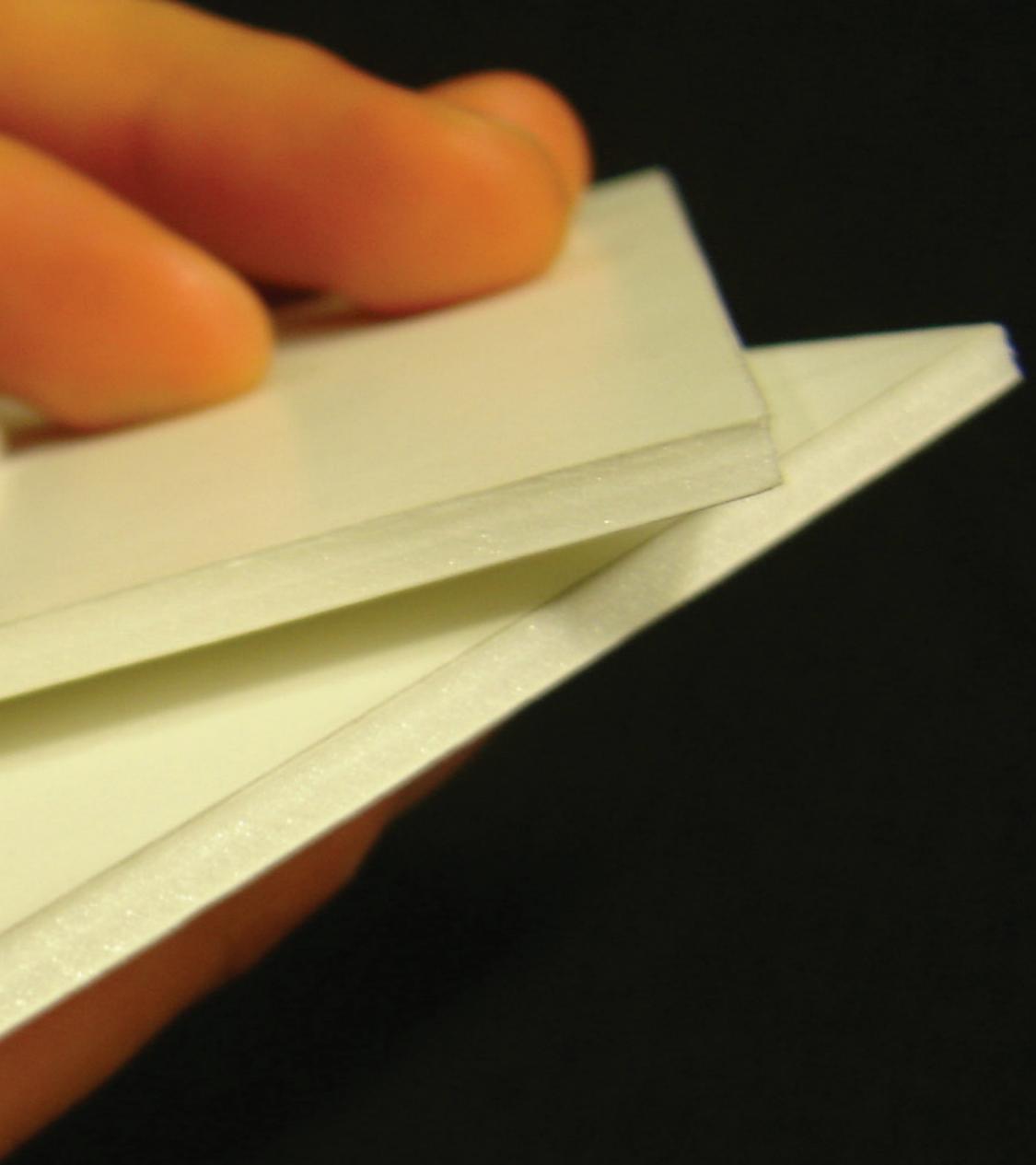


References

- Aarts, E., Harwig, R. and Schuurmans. Ambient intelligence (2002). In: Denning, P.J. (ed.), *After Cyberspace: When computing becomes our world*. AMC Press.
- Hummels, C., and Vinke, D. (2009). *Developing the competence of designing intelligent systems. Eindhoven Designs, volume two*. Eindhoven University of Technology, The Netherlands
- Weiser, M (1995). The Technologist's Responsibilities and Social Change. *Computer-Mediated Communication Magazine*, 2, 4, 1995.







Acknowledgements

We are very grateful for the achievements, passion, energy and motivation of our students and for the never-ending support our staff members provide them with. We would like to thank all the students whose work is shown on the photographs in this book and we would like to give special thanks to those students and staff members who turned ID'10 into a success.

