HUMAN TECHNOLOGY RELATIONS

INDUSTRIAL DESIGN ENGINEERING MASTER TRACK
“Amplified walking project”
Create the Future 2010
Industrial Design Engineering = making technology available for users. This means a perspective on design that takes both technology developments and human characteristics into account on an individual, social and societal level.

“Amplified walking project”
Create the Future 2010
Making technology available for users
People Oriented Designer
Industrial Design Engineering

Human Technology Relations (HTR)
Emerging Technology Design (ETD)

People oriented designer
Technology oriented designer

IDE
Industrial Design Engineer

Positioning of the Tracks

Individuals | Collectives | Societies

designer-Manager
Management of Product Development (MoPD)

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“attractive things really do work better” Donald Norman (2004)

The people oriented designer knows the *problems, aims, concerns and aspirations* of individuals, collectives and societies, and he or she is able to translate these into *feasible product design solutions*.
High Tech Human Touch

UT’s central place for ‘doing design’
High Tech Human Touch

UT’s central place for ‘doing design’
MASTERTRACK COURSES

- Division in Mandatory, Recommended Elective-, and Free Elective courses
- 75EC courses (35EC Mandatory)
- 45EC Graduation Project

Mandatory courses (35EC):
- Multi Sensory Design (Geke Ludden)
- Science & Technology Studies (PSTS – Annelisa Pelizza) [link](#)
- Scenario Based Product Design (Julia Garde)
- Design Histories (Wouter Eggink)
- Design & Emotion (Thomas van Rompay)
- Create the Future (10EC) (Wouter Eggink & Adri Albert de la Bruheze)
Recommended electives:
- Graphic Language of Products (Maaike Mulder Nijkamp)
- Design for interaction (Jelle Stienstra/Jelle van Dijk)
- Design Management (Jörg Henseler)
- Sources of Innovation (Angèle Reinders)
- Embodied Interaction (Jelle van Dijk)
- Packaging Design & Management 1 (Roland ten Klooster)
- Capita Selecta Human Technology Relations (Geke Ludden/Wouter Eggink/Jelle Stienstra/Jelle van Dijk/Julia Garde/Arie Paul v.d Beukel)
- Design Competitions (Marten Toxopeus/Tutors)

Free electives: (anything possible, after approval of Track Coordinator)
MASTERTRACK
OVERVIEW (2015-2016)

1st Quartile
Multi Sensory Design
Science & Technology studies
Elective

2nd Quartile
Scenario Based Product Design
Elective
Elective

3rd Quartile
Design & Emotion
Elective
Elective

4th Quartile
Design Histories
Elective
Elective

1st Quartile
Create the Future (10EC)
Elective

2nd Quartile
Graduation Project (45EC)
MULTI SENSORY DESIGN
GEKE LUDDEN (INTERACTION DESIGN)
MULTISENSORY DESIGN

CONTENTS OF THE COURSE

Lectures
- theory on sensory perception
- theory on role of modalities in human – product interaction
- theory on cross modal interactions

Sensory Workshops
- Audition
- Vision
- Scent
- Touch

Multisensory design approach
Design assignment
MULTISENSORY DESIGN
ROLE OF MODALITIES IN HUMAN-PRODUCT INTERACTION
This course will introduce you to the interdisciplinary field of science and technology studies. You will become acquainted with the main theoretical approaches in the field, including the Strong Programme, the Social Construction of Technology, Actor Network Theory and Evolutionary Approaches. Moreover, you will gain hands-on experience of working with STS theories and concepts by conducting empirical research into recent developments in science, technology and society.

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SCENARIO BASED PRODUCT DESIGN

WHAT IS A SCENARIO?

* **Scenario:** ‘sketch of use’
  - Narrative, storyboard, movies, role play, …

* **Definition:** scenarios are explicit descriptions of hypothetical use of a product or service
SCENARIO BASED PRODUCT DESIGN
SCENARIO ELEMENTS

- setting
- issue
- goal
- actor
- actions
- product
  - service
- persons
- events
  - objects & tools
- environment
SCENARIO BASED CO-DESIGN
SCENARIO BASED DESIGN
CENTRAL RESEARCH QUESTION

What is the usability and usefulness of scenario based product design and which techniques should be applied in which case?
SCENARIO BASED DESIGN
COURSE CONTENT

* Workshops & lectures
* Ongoing design research
  Research group: Human Centred Design
* Individual assignment
* Group assignment

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“Consumers don’t just buy a product; they buy value in the form of entertainment, experience, and identity” (Esslinger; FROG DESIGN).

“Emotions arise in response to events that are important to the individual’s concerns” (From Nico Frijda’s “LAWS OF EMOTION”).

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DESIGN & EMOTION
THEORY

Chair made from biodegradable materials

CONCERN I: concern for “the environment”
> EMOTIONS: delight, fascination, interest

CONCERN II: concern for “status”
> EMOTIONS: boredom, anger, frustration

patient-visitor  run-fun shopper  lust-must traveler
DESIGN HISTORIES
WOUTER EGGINK (INTERACTION DESIGN)
DESIGN HISTORIES

AIM

Knowledge of history can help us to acquire better understanding of the present, provides the possibility to place contemporary developments within a tradition, and helps to interpret new phenomena by means of precedents. In short, knowledge of the history of the discipline is not only to ascertain a scholarly attitude or to win with trivial pursuit, but foremost to be able to make better designs.
DESIGN HISTORIES
METHOD

- Theory; knowledge
- Excercises; skills
DESIGN HISTORIES

METHOD

- Theory; knowledge
- Excercises; skills

T3 – 1958 – Braun - Germany
Designer; Dieter Rams

iPod – 2001 – Apple - US
Designer; Jonathan Ive
DESIGN HISTORY

METHOD

- Theory; knowledge
- Exercises; skills

T3 – 1958 – Braun - Germany
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iPod – 2001 – Apple - US
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Links: T3 Transistor-Taschenempfänger von Braun; rechts: iPod von Apple; unten: PS1000 Plattenspieler von Braun © Raacke / Left: T3 pocket radio by Braun; right: iPod by Apple; bottom: PS1000 turntables by Braun © Raacke
DESIGN HISTORIES

METHOD

- Design History in streams and styles.
- Design History in ideas.
- Design History in culture, context and artefacts.
DESIGN HISTORIES

METHOD

- Design History in streams and styles.
- Design History in ideas.
- Design History in culture, context and artefacts.
DESIGN HISTORIES
SETUP

Lecture series
Written exam
Book

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DESIGN HISTORIES
CONCLUSION

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Wouter Eggink
“Unless we change the direction in which we are headed, we might end up where we are going”

*Chinese Expression*
CREATE THE FUTURE
IMAGINATION

Ford Atmos concept, 1954

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Een stille wees op zolder
“a silent orphan in the attic”


De neergang is veel eerder ingezet. Eind jaren tachtig begonnen de platenspeler en het cassette-deck in de huiskamers oorverdend te worden‘, constateert Barbara Schirren van muziekonderzoeker GfK in een terugblik op twintig jaar consumentenelektronica. Door de komst van nieuwe productinnovaties, waaronder de cd-speler, zijn deze naar de zolder gestuurd.

In de statistieken is het begrip ‘cassette deck’ al jaren niet meer dan een vluchtige vermelding waar. In het jaarrapport 2007 van de Vereniging van Fabrikanten, Importeurs en Agentsen op Radio- en Platengezinst (afgekort tot FPR), die zich op het GfK baserend is, het apparaat een deel van het audiopad op een hoog gebied met andere audiopadmoren, de cd en de minder populaire muziekplaten die door nieuwe technieken zijn ingehaald.

Van deze verwoeste producten werden er 600 duizend verkocht. Dat zou bij een evenredige verdeling, neerkomen op 300 duizend cassette deksels in een jaar. Er gingen telkens in de 17 miljoen cd-sprekers – de cd en de cassette als de houten doos van de toonbank. Bijna negen halve groo.

De cassette deksels worden voor zoveel jaar consumenten en verkoopbare producten, waaronder de cd-speler, zijn deze naar de zolder gestuurd.

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Technology changes
CREATE THE FUTURE
TECHNOLOGY CHANGES BEHAVIOUR

Vrouwen begeven zich, aangestuurd door de TomTom, zelfbewust door het drukke autoverkeer. Ook op vakantie worden de Spaanse bergen en de Franse binnenweggetjes voortaan probleemloos genomen. Hoe een navigatiesysteem de vrouwencultuur bevorderde. 'Leuk hè, dwars door Parijs rijden.'
Door Wilma de Rek

Vanaf vandaag rijdt mama

"From now on, mother takes the steering wheel"

Volkskrant
25 juli 2008
CREATE THE FUTURE
BEYOND THE CLICHÉ

Washington Post (1901): "We have sanitation, surgery, drainage, plumbing, every product of science and accessory of luxury. It seems impossible to imagine any improvement on what we have."

• Scenario Development, based on trend analysis
CREATE THE FUTURE
SCENARIOS
CREATE THE FUTURE
FROM NOW ON, YOU ARE ON YOUR OWN
CREATE THE FUTURE
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CREATE THE FUTURE.
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CREATE THE FUTURE
45EC
- internal (Design Research assignment)
- external (at/with/for a Company that acts as a Client)
“Bright Light Therapy for burnout”

The research and design of a Bright Light Therapy application for in-home treatment of burnout patients.
Motivation to use: implement in design
Contact with therapist + measure wellbeing: design supporting application
Measure effect: evaluative user study with prototypes
Research project under development building on results
Presentation of results at HealthbyTech conference in May.
The design of conceptual interactive play sets for the public outdoor environment
The design of conceptual interactive play sets for the public outdoor environment research
The design of conceptual interactive play sets for the public outdoor environment

Future exploration
The design of conceptual interactive play sets for the public outdoor environment prototype
The restyling of PV modules by modified screen printed front contact patterns
The restyling of PV modules by modified screen printed front contact patterns
Infento Robotics
Conclusion/Summary:

- People oriented designer
- (Design of) Human Technology Relations = making technology available for users
- Product, Service & Interaction Design
- Including design histories, forecasting the design future, design for behaviour change and improving products using the knowledge of users