



The Issue of the PhD Study and the Current State of the Solution

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ústav
konstruování

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Introduction

- Position: PhD Student
- Type of study: full time study
- Year: 2



- Subject: Visual language of controllers and communicators
- Supervisor: doc. Ing. arch. Jan Rajlich

Current state of study

Finished exams

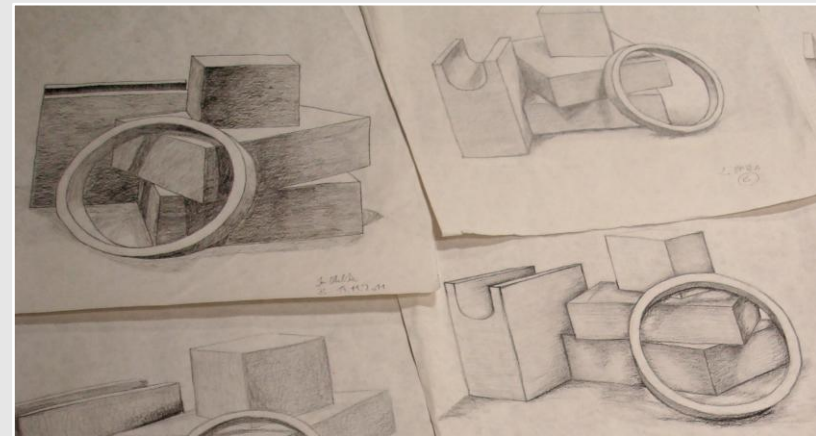
- 9AJ English for Doctoral Degree Study
- 9VPR Research Project and its Management
- 9VDE Theory of Visual Style in Design
- 9DMA Design-Management



Current state of study

Teaching activities

- YKA Fundamentals of Drawing
- YDF Fundamentals of Design
- YTG Typography
- YA4-A Workshop – Industrial Design IV
- YG1-A Workshop – Graphic Design
- YDT Typology of Design
- YDP Type



Research and Publishing

Projects

Specific research

Creating Structured Genesis of Artifact by Optical Digitization

(Tvorba strukturované geneze artefaktu metodami optické digitalizace)

Team members

Ing. David Škaroupka, Ing. Eva Fridrichová, Ing. Róbert Machálek, Ing. Veronika Sedláčková

FRVŠ □

Photographical Support of Workshop Outputs

(Podpora fotografické dokumentace výstupů ateliérové tvorby)

Team members

Ing. Veronika Sedláčková, Ing. Eva Fridrichová

Research and Publishing

Article

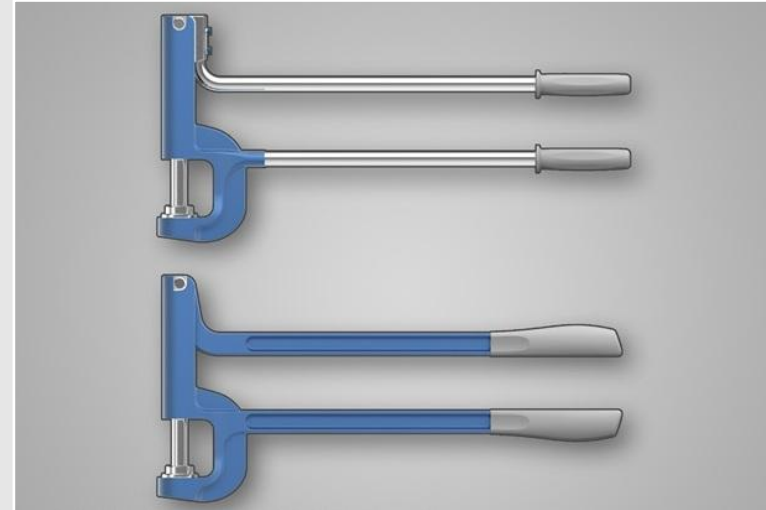
Applying pre-design research to new product development: case study of hand tool design

Conference Proceedings, 53rd International
Conference of Machine Design Departments

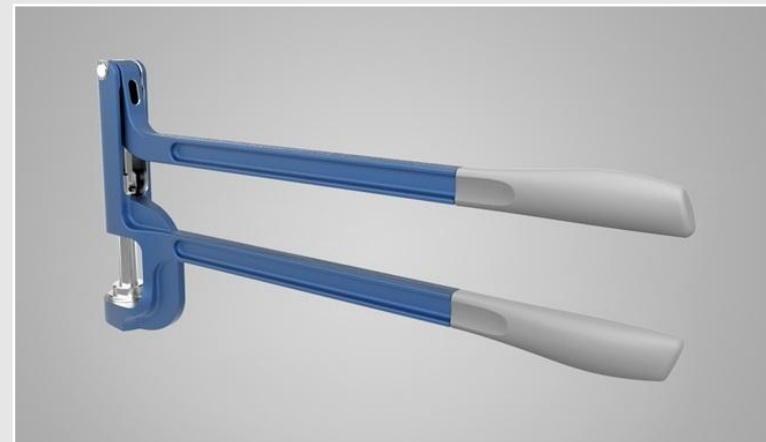
Authors

Ing. Eva Fridrichová, Ing. Róbert Machálek

- Pre-design research
- Integration of the new solution
- Application of SD test and 7-point Likert scale
- Creation of hi-fidelity model



■ Obr. 1, Selected variant and evolution into C



■ Obr. 2, Final design of variant C

Research and Publishing

Design Patent

Design of Mailbox

Registration No.: 35311

Date of publication: 16.05.2012

Team members

Ing. Tomáš Bařina

Ing. Eva Fridrichová

doc. akad. soch. Ladislav Křenek, Art.D.



The Issue of the PhD Study

Visual language of communication graphical symbols

- Topic deals with legibility and comprehensibility of communication graphical symbols
- Perceiving of information by pictograms
- Symbol comprehension, testing and design

State of Knowledge

Short history of graphical symbols in points

- Prehistoric wall printings
- Egyptian hieroglyphs, Indian pictograms
- ISOTYPE (1935) (Otto Neurath, Austria)
- Traffic signs
- LoCoS (1964) (Yukio Ota, Japan)
- Aicher's Frankfurt Airport sign system (1971)
- Standardization of graphical symbols

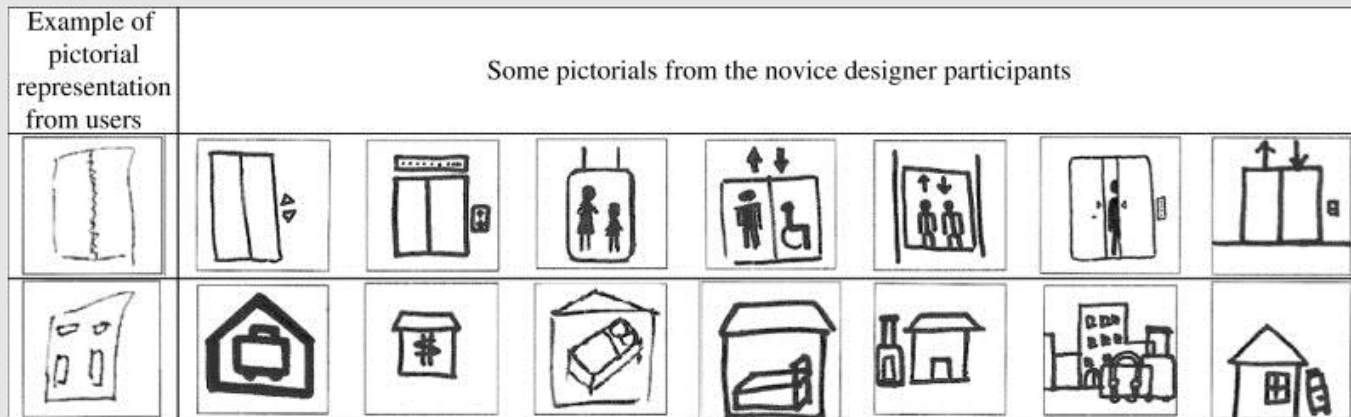


- Obr. 3, Pictograms for ISOTYPE, Gert Arntz
<http://www.scamp.ie/index.php/2008/05/gerd-arntz-and-isotype/>

State of Knowledge

Stereotype Production Method

This method involves asking a group of representative users to draw pictorials that best express the symbol referent of interest, i.e. the message that a symbol is intended to communicate.



■ Obr. 4, Elevator (upper row) and accommodation (lower row), <http://www.sciencedirect.com/science/article/pii/S0003687012000610>

State of Knowledge

Likert Scale

A method describe quantitative value to qualitative data, to make it available to statistical analysis.

Likert scales have 5-10 potential choices.

Semiotic Analysis

Relation between signs and the things to which they express.

Sign - Object - Interpretant

Denotation – strict meaning of a sign

Connotation – emotional and imaginative association of a sign

Likert Scales

Please circle the number that represents how you feel about the computer software you have been using

I am satisfied with it
Strongly Disagree --1--2--3--4--5--6--7-- Strongly Agree

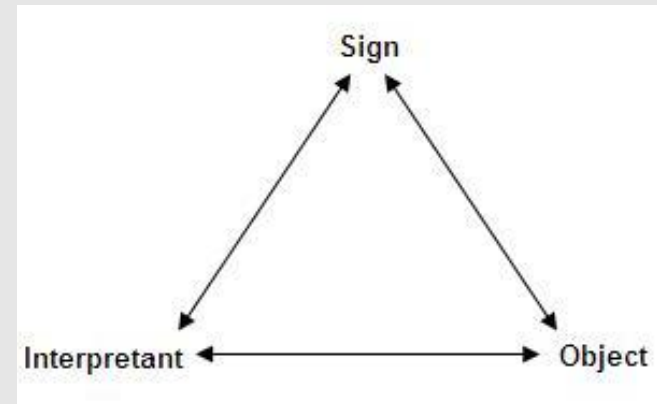
It is simple to use
Strongly Disagree --1--2--3--4--5--6--7-- Strongly Agree

It is fun to use
Strongly Disagree --1--2--3--4--5--6--7-- Strongly Agree

It does everything I would expect it to do
Strongly Disagree --1--2--3--4--5--6--7-- Strongly Agree

I don't notice any inconsistencies as I use it
Strongly Disagree --1--2--3--4--5--6--7-- Strongly Agree

It is very user friendly
Strongly Disagree --1--2--3--4--5--6--7-- Strongly Agree



State of Knowledge

ISO 9186-1: 2007, Graphical symbols - Test methods - Part 1: Methods for testing comprehensibility.

ČSN ISO 9186-1

ISO 9186-2: 2008, Graphical symbols - Test methods - Part 2: Method for testing perceptual quality.

ČSN ISO 9186-2

ISO 7001: 2007, Graphical symbols - Public information symbols.

ČSN ISO 7001

ISO 22727: 2007, Graphical symbols - Creation and design of public information symbols – Requirements.

ČSN ISO 22727

Aim of Research

- Research of legibility and comprehensibility selected pictograms in civil aviation (safety, information and air traffic graphical symbols)
- Factors influencing comprehension
- Compare of standartization and nonstandartization grahical symbols
- Redesign and development of new graphical symbol system



Current State of Solution

- Theme specification
- Study of sources
- Formulation of goals
- Choice of methodology





Thank you for attention

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