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

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Seminar
3rd October 2012, FME BUT, Czech Republic
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
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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
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Research and Publishing

Projects
Specific research

Creating Structured Genesis of Artifact by Optical Digitization
(Tvorba strukturované geneze artefaktu metodami optické digitalizace)

Team members

FRVŠ
Photographical Support of Workshop Outputs
(Podpora fotografické dokumentace výstupů ateliérové tvorby)

Team members
Ing. Veronika Sedláčková, Ing. Eva Fridrichová
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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
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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.

![Example of pictorial representation from users](image)

Obr. 4, Elevator (upper row) and accommodation (lower row),
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
State of Knowledge

ČSN ISO 9186-1

ČSN ISO 9186-2

ČSN ISO 7001

ČSN ISO 22727
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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 grafical 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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