



Human Computer Interaction

Chapter 8: Prototyping

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Overview



- What is Prototyping and why should I do it?
- **O2** Taxonomy of Prototypes
- **03** Low-Fidelity Prototypes
- **04** High-Fidelity Prototypes
- **05** Horizontal and Vertical Prototypes
- 06 Tools and Implementation



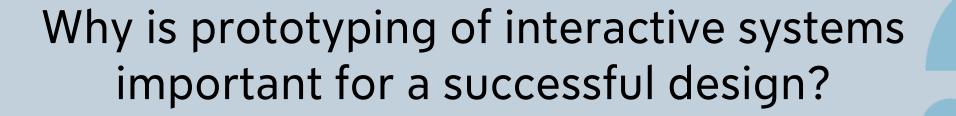
Machine Learning and Data Analytics Lab (MaD) in Erlangen





What is Prototyping and why should I do it?





What is Prototyping



Prototype - model final product (allow testing its athibutes.

Prototyping models the final product and allows testing its attributes on this model

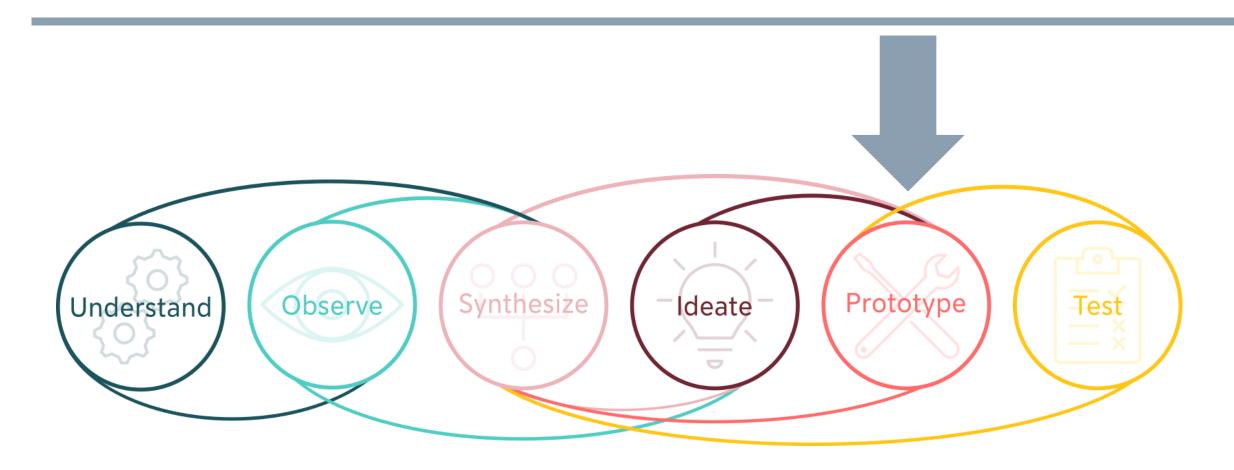
Not necessarily representative of a complete system!

Not recessarily representative of a complex system.

Prototyping for Communication Ideas







Sjøkvist, Nina & Kjørstad, Marianne. (2019). Eliciting Human Values by Applying Design Thinking Techniques in Systems Engineering.

Why Prototyping?







Enable rapid movement through DIA cycle

Evaluation and feedback are central to interaction design



Test out ideas for yourself or with users

Proof of concept, get feedback



Build prototype to answer specific design questions

- Helps choosing between alternatives
- Explore the unknown



Communicate an idea

Fine-tune an idea

What to Prototype?



Technical issues

Workflow, task design

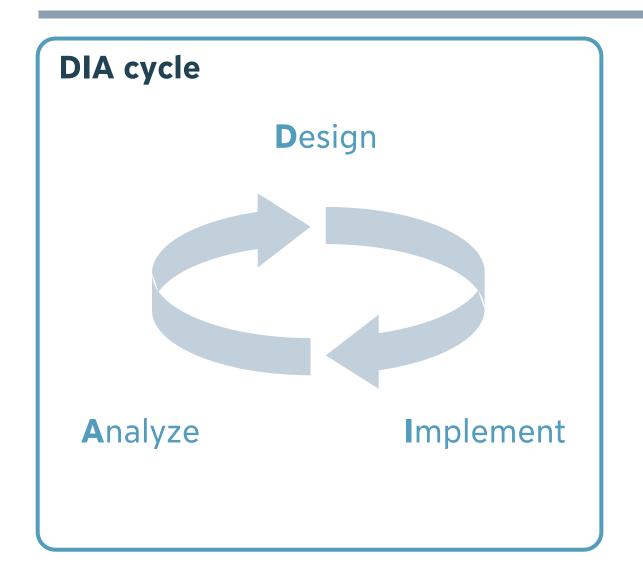
Screen layouts and information display

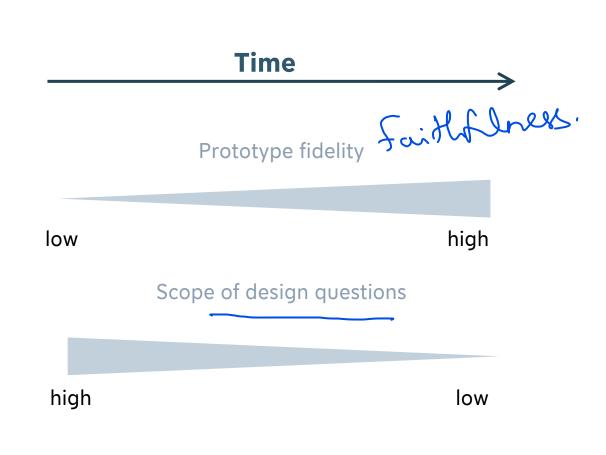
Controversial or crucial areas

Choose an appropriate prototype for your requirements

When to Prototype?







Prototyping in DIA Iterations



Project Start

Brainstorm design ideas Design

Choose an idea

Roughout interface style

Task-centred walkthrough & redesign

Fine-tune interface, screen design

Heuristic evaluation and redesign

Usability testing and redesign

Limited field testing Alpha/Beta tests

Low fidelity paper prototypes

Low

Medium fidelity prototypes

High fidelity prototypes

Working systems





