Prototyping UX
From Sketch to Product

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Double Diamond

DISCOVER  |  DEFINE

DESIGN  |  DELIVER

Why? and How?

source: [8]
An original type, form, or instance that serves as a model on which later stages are based and judged.

American Heritage Dictionary
Three main goals

1.) Exploring a context
2.) Examining design problems
3.) Evaluating solutions
Three main contexts

1.) Screen based interactions
2.) Interactive products
3.) Technology enabled services
For the Designer:
- Exploration
- Visualisation
- Feasibly
- Inspiration
- Collaboration

For the End User:
- Effectiveness / Usefulness
- A change of viewpoint
- Usability
- Desirability

For the Producer:
- Conviction
- Specification
- Benchmarking

source: [5]
Fidelity v. Resolution

low resolution
low fidelity

high resolution
low fidelity

high resolution
high fidelity

resolution = amount of detail
fidelity = closeness to the eventual design (product/service)

source: [5,6]
Low Resolution

Less Details
Focus on core interactions
Quick and Dirty
Early Validation

High Resolution

More Details
Focus on the whole
Deliberate and Refined
Concrete Ideas

source: [5,6]
1st Iteration
low-res/low-fi
4th Iteration high-res/high-fi
Some Examples from Design Workshops

@ LMU Mediainformatics
+ TUM Industrial Design
+ TUM Architecture Informatics
+ LMU Art & Multimedia
Design Workshop II
Design Workshop II
Design Workshop II
In conjunction with B/S/H (Neff)
Home Appliances

- 12 MA Media Informatics Students
- Duration: One semester
- Topic: Tactile Feedback
Prototypes
Prototypes
Design Workshop II
In conjunction with Acelik Home Appliances

• 16 MA Industrial Design Students
• 14 MA Human-Computer Interaction Students
• Duration: One semester
Reminding Water Dispenser
Pure Air
Dirt Buster

LMU München – Medieninformatik – Alexander Wiethoff – UX1
Recipe Printer
Design Workshop II
in conjunction with Gewofag Munich

• 4 MA Architecture (TUM)
• 12 MA Human-Computer Interaction Students (LMU)
• Duration: One semester
The Mapped Show

LMU München – Medieninformatik – Alexander Wiethoff – UX1
Smart City Table
StreetView Game
StreetView Game
It’s really hard to design products by focus groups. A lot of times, people don’t know what they want until you show it to them.

Steve Jobs
Horizontal vs. Vertical Prototype

https://media.nngroup.com/media/editor/2012/12/10/guerrilla_scenario_fig.gif

LMU München – Medieninformatik – Alexander Wiethoff – UX1
80/20 rule
A principle for setting priorities: users will use 20% of the features of your product 80% of the time. Focus the majority of your design and development effort (80%) on the most important 20% of the product.
Paperprototyping & Wireframes
Wireframes
PAPER PROTOTYPING POP

Take photos of your sketches or design in the app

Link your screens together using hotspots

Play with your app idea or test it out on friends

Or share with others by using Facebook, Twitter, Email...
Video-demo

https://www.youtube.com/watch?v=EGp20lVwUa8
PAPER PROTOTYPING POP

- choose from a wide range of interface modules
- import your sketched wireframes
- turn sketches into clickable prototypes
PAPER PROTOTYPING BALSAMIQ
- choose from a wide range of interface modules
- create fast low fidelity clickable prototypes
POP VS. BALSAMIQ

**POP**

+ Use your own sketches
+ Fast and easy prototyping
- Limited UI elements

**BALSAMIQ**

+ Create new mockups directly from the “Create New” menu
+ Simply click to edit wireframes
+ Sketch-based wireframes allow designers to focus on functionality
+ 30 days free trial
- Limited functionality
## Overview Prototyping Tools

<table>
<thead>
<tr>
<th>Low Fidelity</th>
<th>Mid Fidelity</th>
<th>High Fidelity</th>
</tr>
</thead>
<tbody>
<tr>
<td>- POP</td>
<td>- Sketch</td>
<td>- InVision</td>
</tr>
<tr>
<td>- Balsamiq</td>
<td>- Proto.io</td>
<td>- Marvel</td>
</tr>
<tr>
<td></td>
<td>- Pixate</td>
<td>- Justinmind</td>
</tr>
<tr>
<td></td>
<td>- axure</td>
<td>- Framer</td>
</tr>
<tr>
<td></td>
<td>- Mockplus</td>
<td>- Adobe XD</td>
</tr>
</tbody>
</table>
# Overview UI Prototyping Tools

<table>
<thead>
<tr>
<th>Prototyping Tools</th>
<th>Mockplus</th>
<th>Axure</th>
<th>Balsamiq</th>
<th>Justinmind</th>
<th>Sketch</th>
<th>Adobe XD (Preview)</th>
<th>Invision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Productivity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Learning Curve</td>
<td>Very Easy</td>
<td>Complex</td>
<td>Very Easy</td>
<td>Complex</td>
<td>Average</td>
<td>Average</td>
<td>Easy</td>
</tr>
<tr>
<td>Integrated Efficiency</td>
<td>Fast</td>
<td>Average</td>
<td>Fast</td>
<td>Slow</td>
<td>Average</td>
<td>Average</td>
<td>Fast</td>
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<tr>
<td>Interaction Design</td>
<td>Fast</td>
<td>Average</td>
<td>-</td>
<td>Average</td>
<td>Plug-in Required</td>
<td>Fast</td>
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<tr>
<td>Build Widgets</td>
<td>Fast</td>
<td>Slow</td>
<td>Fast</td>
<td>Average</td>
<td>Slow</td>
<td>Slow</td>
<td>-</td>
</tr>
<tr>
<td>Device Testing</td>
<td>Fast</td>
<td>Slow</td>
<td>-</td>
<td>Average</td>
<td>Plug-in Required</td>
<td>Average</td>
<td>Fast</td>
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<td><strong>Fidelity</strong></td>
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<tr>
<td>Visual Fidelity</td>
<td>Average</td>
<td>Average</td>
<td>Low</td>
<td>High</td>
<td>High</td>
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<td>High</td>
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<tr>
<td>Interactive Fidelity</td>
<td>Average</td>
<td>High</td>
<td>-</td>
<td>High</td>
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<td>High</td>
<td>Average</td>
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<tr>
<td><strong>Professional Skill Requirement</strong></td>
<td></td>
<td></td>
<td></td>
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<td>Product Experience</td>
<td>Required</td>
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<td>Visual Design</td>
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<td>Programming Knowledge</td>
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<td>Basic Knowledge</td>
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<tr>
<td>Sharing</td>
<td>Average</td>
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<td>Average</td>
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Video-demo

https://www.youtube.com/watch?v=1H7Ql9hmbuM
Sketching with Hardware
- Force Sensor
- Potentiometer
- Magnet Switch
Distance IR Sensor  Touch QT Sensor  Ultrasound Sensor
MINIMUM Viable Product

Crappy products

MINIMUM

Viable

BEST PRODUCTS TO STARTUPS

Better-financed products
Quick video overview
Video-Prototyping
Representing complex relationships, new behaviours and attitudes are an integral part of interaction design.

These can be represented through many means including sketching and making physical prototypes.

However, capturing a journey over time requires a linear medium like video.
"Just Enough Prototyping"

Understand your audience and choose the right level of resolution and fidelity.

Judge the time and resources available.

Go for the easiest and simplest track, don’t overdo you prototype for a given context.
low resolution
high fidelity
(crossing on demand)
Zebra Zone
The Smoke & Mirror Approach
Sketching with Hardware
Thermistor

Bend Sensor

PIR Sensor
Force Sensor

Potentiometer

Magnet Switch
Distance IR Sensor  Touch QT Sensor  Ultrasound Sensor
MINIMUM Viable PRODUCT

Crappy products

MINIMUM

Viable

BEST PRODUCTS TO STARTUPS

Better-financed products
Quick video overview
References (Papers + books)

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    ISBN-10: 0262134748

[2] Buxton, W.: Sketching the user experience
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