Visualisation of Affordances

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touch
shift
grab
Presentation

• **Why** do I want to visualise interaction?
• **How** did I approach this?
• **What** is my visualisation?
• Extra: things to consider in visualisations
Why?
Visualisation for interaction design

- **Product:** sketches, CAD models, Arduino
- **User:** personas, measurements
- **Context:** cultural probes, context mapping
- **Interaction:** Frogger framework (abstraction), video (limited trace)
TINKERING  ENGINEERING  SCIENCE

WITH BUILDING TOOLS

AND CONCEPTUAL TOOLS

AND SEEING TOOLS
How to visualise interaction?
How to visualise interaction?

(dynamic, intangible, personal)
How?
Requirements

- Theoretically OK
- Useful for design (research)
Affordances

= possible actions an organism perceives in relation to their environment (~ Gibson)

Picture: Found Table by Brenna / Flickr (CC BY 2.0)
Affordances

Environmental perspective
“I offer the possibility to turn on the light by the touch of a hand.”
(⟨effect⟩, ⟨⟨agent⟩, ⟨behaviour⟩⟩)

Agent perspective
“I can get more light by touching such a surface.”
(⟨effect⟩, ⟨⟨entity, behaviour⟩⟩)

Observer perspective
“The light can be turned on by such people touching such surfaces.”
(⟨effect⟩, ⟨⟨agent⟩, ⟨⟨entity, behaviour⟩⟩⟩)

Use cases for seeing affordances

- **Education**: what are affordances (not)?

- **Simulation**: iterate more quickly by testing prototype variations.

- **Qualitative research**: compare interpretations by sketching.

- **Design**: sketch the affordances first, the product second.

- **Sharing insights**: library of affordances?
What?
“Design a remote control for a growing multimedia system.”
Exploratory prototype by Jordy Rooijakkers (2014).
Visualisation of affordances
Considerations
Visualising the lived world
Attensity of affordances

Abstract representations

Showing relations
Perspectives on subjective experience
Perspectives on subjective experience

[Diagram showing perspectives: my observer, third person, Write, Draw, My pen, Take a break, Front door]
Visualising dynamics
Ontology for interaction
Conclusions

• Interaction design needs better visualisation techniques.

• The *Visualisation of Affordances* is an early example.
Next steps

• Can this actually be used for design?

• How to deal with more complexity?

• Can we link it more closely to product and human body properties?

• How to measure the data?

• How to standardise the sketches?