

Translating Technology Through Design

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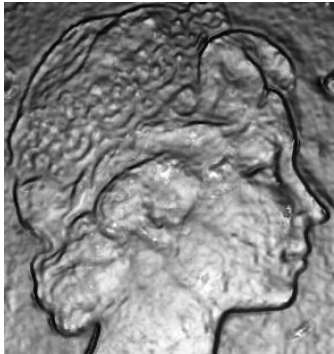
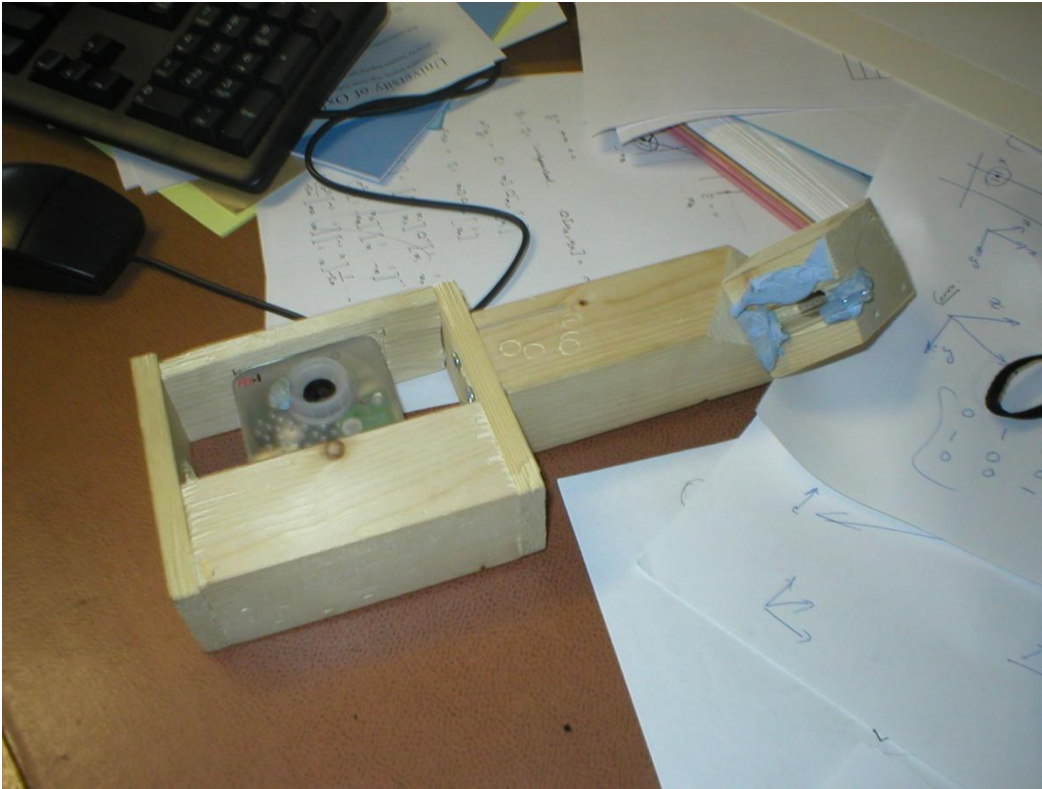
Contents

- Review of different design tools and process
- Examples
- Conclusions

An Introduction to some Design Tools

- Brainstorming
- Interface
- User Research
- Visualisations
- Ergonomics
- Prototyping

3D Scanner



Virtual Reality Headset



Brainstorming



Method of exploring ideas, technology, markets, needs, manufacture etc.

Musts:

- Facilitator
- Plan
- Maximum 12 people
- Mix of skills/ experience
- Positive attitude
- No exaggerated egos

Wants:

- Illustrate ideas
- Record event

Interface Design



- > Making the user's interactions as intuitive as possible (user centered design)
- > Can be a few buttons or a complex menu of screens. In medical, military and transport it can be safety critical

Interface Design (cont.)



Depending on the task you may benefit from:

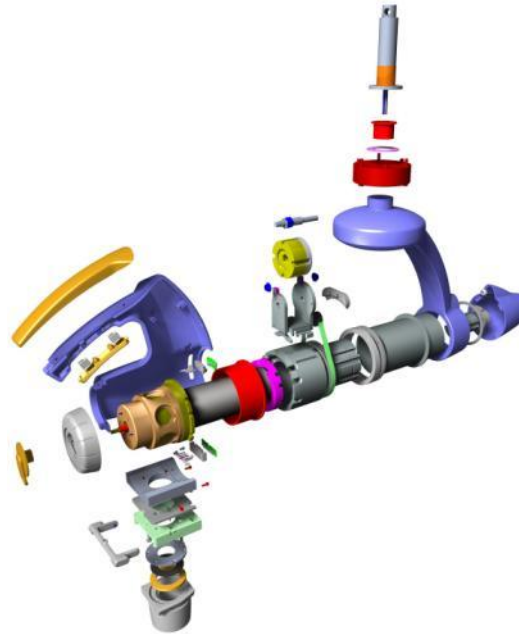
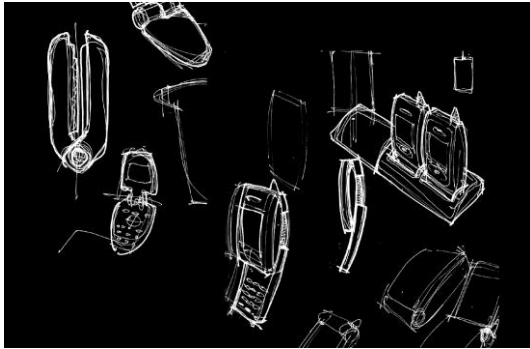
- > Electronics software engineers
- > Ergonomist
- > Product/Graphic Designers
- > Simulation
- > End User Panel

Check the perception of your concept with the 'end user'



- > Check that the problem you are trying to solve is perceived as a 'problem'
- > Many users will understand a problem but may not be able to imagine a solution
- > Use concept boards or models to explain ideas
- > Show alternatives
- > Don't forget the CDA

Visualisations worth a thousand words





Prototyping



3D CAD to working parts

Summary: Design Needs

- Projects are often at too early a stage to sell
- Researchers/Inventors driven by intellectual rather than product development challenges
- Researchers are not designers – so even when they are committed to development they may not be the best people
- Usually, there is very little cash available, so...
 - Make good use of small amounts of cash (£5-15K)

Summary: Design Needs (cont.)

- **Solution:**
 - Short term assignments with designers
 - Suggest funding level of ~£10-15K per project
 - Seed funds may be available for this translation work
- **and then....**
 - Use the funding to undertake further development
 - Facilitated brainstorming
 - Proper design prototypes
 - User engagement
 - Visualisation

Any Questions?

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