Towards a Design Methodology for Intuitive Interaction

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Principle 1

Make function, location and appearance familiar for features that are already known.

Use familiar symbols and/or words, put them in a familiar position and make the function comparable with functions users have seen before.

Principle 1 involves applying existing features, labels or icons that users have seen before to similar products that perform the same function.
Principle 2

Make it obvious what less well-known functions will do by using familiar things to demonstrate their function.

Principle 2 makes something completely new familiar by relating it to something already existing.

This principle requires transfer of features from differing domains.
Principle 3

Increase the consistency within the interface so that function, appearance and location of features are consistent between different parts of the design and on every page/screen/part/mode.

Use redundancy in order to maximise the number of users who can intuitively use the interface and the ways in which they can choose to complete their tasks.
Applying Intuitive Interaction

Designers must understand two important things before trying to apply these ideas to a design:

Who are the users?
What are they familiar with?
Continuum of Intuitive Interaction

**Old**

Product context or technology

**New**

**Principle 1**

Body

Reflector

Population

Stereotype

Familiar feature from same domain

Familiar feature from other domain

Perceived affordance

External consistency

**Principle 2**

Metaphor from other domain

**Principle 3**

Physical Affordance

Compatible mapping
Model Trial

Round 1:
- one undergraduate student

Brief to design digital camera

Weekly supervision
Model Trial

1. Body reflector
2. Familiar feature - same domain or other domain
3. Familiar feature - same domain
4. Familiar feature - other domain
5.
6. Familiar feature - same domain
7.

Introduction  Literature  Research  Outcomes  Applications
Model Trial

Familiar feature - other domain

Familiar feature - same domain

Metaphor
Model Trial

Successful and innovative design

Student found the model useful

It forced him to think about users in a much more detailed manner

However, he found user group and user familiarity difficult to ascertain
Model Trial

Round 2:
• 7 groups of postgraduate students

Various products

Usability testing before and after re-design

More structured advice for researching user group and user familiarity was provided

Weekly supervision
Model Trial
# Model Trial

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<tr>
<th>Icon</th>
<th>What it represents?</th>
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**Introduction**  
**Literature**  
**Research**  
**Outcomes**  
**Applications**
Model Trial
Model Trial

**PANASONIC TV REMOTE**
- "UP" arrow is moved back and the "N" button is pushed.
- Used in conjunction with menus and the navigator keys to make selections of functions and enter them.
- Grey rectangular button with white "H" text in the middle.
- Under covered part at the base of the remote, in the centre of the navigator pad.

**LG 6710V0110K REMOTE**
- Depress the button to turn on/off TV.
- Tuns on corresponding TV.
- Main power is rectangular grey button, there is no symbol only text saying power.
- Top left of the remote.

**CELESTIAL 1225C1 REMOTE**
- Depress the button to turn on/off.
- Tuns on corresponding DVD.
- Main power is rectangular red button, there is no symbol only text.
- Top left of the remote.

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**Introduction Literature Research Outcomes Applications**
Model Trial
Model Trial

Evidence of good research

Outcomes appear successful

Questionnaire results will tell more
Introduction Literature Research Outcomes Applications

User Group

Who are users of devices or products that perform same or equivalent task?

Are there relevant demographic trends?

What market trends are predicted?

User Familiarity

What products or devices do they use?

Which features do they use?

What other life experience do they have?

Which features are relevant for transfer?

Which life experiences are relevant for transfer?

System Structure

What products or devices do they use?

Which features do they use?

Which life experiences are relevant for transfer?
Towards a Design Methodology for Intuitive Interaction

Thank you

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Publications

The following papers have been published based on the work reported here


All papers are accessible at http://eprints.qut.edu.au/view/person/Blackler,_Alethea.html