Designing to be Used
adoption and appropriation

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about me

I work in Lancaster
and live in Cumbria
The Lake District

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… but

although I live in England
and I speak English
I am not English
I am **Welsh**
rydw i'n Cymraeg

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today I am not talking about …

- intelligent internet interfaces
  fuzzy personal ontologies and
  structure from folksonomies

- situated displays, eCampus,
  small device – large display interactions

- fun and games, artistic performance,
  slow time

- physicality, creativity, bad ideas
  + modelling dreams and regret!!
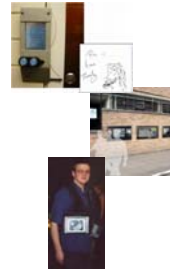
… or even lots of lights

http:/www.hcibook.com/alan/projects/firefly/
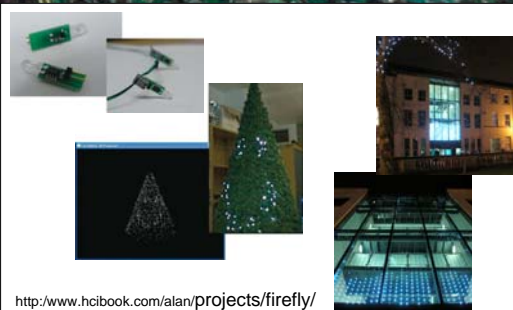
I will talk about

designing to be used

- design for adoption

- design for appropriation

three use words

- useful
  - functional, does things
- usable
  - easy to do things, does the right things
    - include ongoing experience
- used
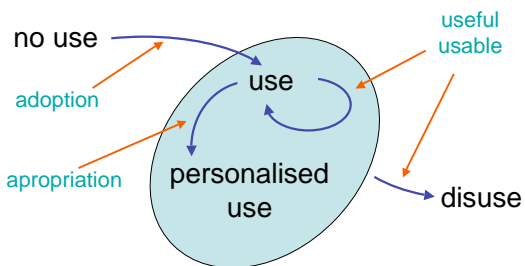 - attractive, available, acceptable to organisation

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appropriation
  - getting initially used

adoption
  - getting eventually USED

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dynamics of use

no use

adoption

apropriation

use

personalised use

useful
usable

disuse

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designing for adoption

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managing the path

no use

think about the whole path

use

easy to focus here
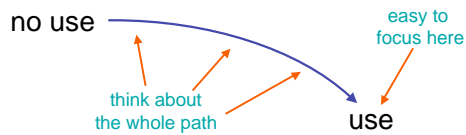
- marketing life cycle: 'early adopters', etc.
- how 'design' it in
- just think

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if you are big

- just stick it in the OS (Microsoft, Apple)

- or stick it on your web site (Google, Yahoo!)

- does NOT guarantee use
  - (e.g. Apple OpenDoc, automator)
  … but it does help ;-)

if not …

you have to think harder!

if you want someone to do something …

- make it easy for them!

- understand their values

designing for value

people use something
    ONLY IF
            it has perceived value
    AND
            value exceeds cost

BUT NOTE
- exceptions (e.g. habit)
- value **NOT** necessarily personal gain or money

weighing up value

value
- helps me get my work done
- fun
- good for others

cost
- download time
- money £, $, €
- learning effort

value depends on time

- in economics Net Present Value:
  – discount by $(1+rate)^{years\ to\ wait}$

- in life people heavily discount
  – future value and future cost
  – hence resistance to learning
  – need low barriers
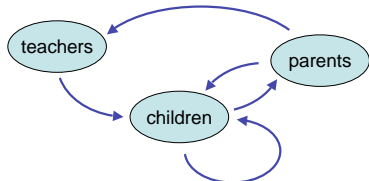   and high perceived present value

value depends on other people

- network effects
  – value of Word for **ME**
    is higher if **YOU** have it too

- critical mass (Grudin)
  ✓ reduce initial cost
  ✓ increase initial value
  ✓ find cliques
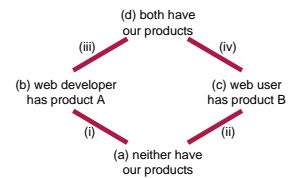
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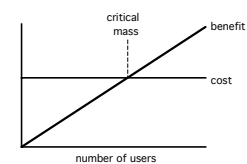
different kinds of people – market ecologies

teachers → parents → children (market ecology diagram with arrows)

critical isues:
– fan-out (gain)
– feedback loops (exponential growth)
– adding paths (information prodicts)

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lattice of value

- two groups (example):
  – developers
  – users

- each need value on their own
  – otherwise initial use

- need more value for both
  – to encourage growth

(d) both have our products
(iii)   (iv)
(b) web developer has product A   (c) web user has product B
(i)   (ii)
(a) neither have our products

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example – HCI book search

- value for people *who have* the book
  helps you to look up things
  – chapter and page number

- value for those *who don't* …
  sort of online mini-encyclopaedia
  – full paragraph of context

… but also says "buy me"!!

... but also says "buy me"!!

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organisational design

- coercion
  - tell them what to do!
  - value = keep your job
- enculturation
  - explain corporate values
  - establish support (e.g share options)
- emergence
  - design process so that
    individuals value → organisational value

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design guidelines ? … some ideas …

- think abut the path

- increase zero point value
- identify cliques
- understand relationships
- create community value
- leverage existing products

see also
Andy Cockburn's
PhD thesis

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designing for appropriation

motivation

- appropriation in many studies
- growing literature
  - Dourish lots, also Jennie Carroll (?Melbourne),
  - several workshops, Illyenkov (cultural timescale)
    - … but hard to find explicit guidance

? how to pass on to students …

why appropriation?

+ situatedness   – every environment different
+ dynamics   – environments and needs change
+ ownership   – feelings of control, pride

? subversion

design for appropriation

≈ design for the unexpected

an oxymoron?

design guidance

- allow interpretation
- provide visibility
- expose intentions
- support not control

- plugability and configuration
- encourage sharing

- learn from appropriation

example - onCue

- suggestions based on clipboard
- observed use:
  - open blank temp doc
  - type in words
  - do 'copy'
  - use onCue
  - discard temp doc
- learn from appropriation
  - redesign had pop-down type-in area

example - eCommerce

- requirement – marker for uncompleted orders
- guidelines:
  - support not control
  - allow interpretation
- provided:
  - uncommitted 'flag'
  - plain text comment
- appropriation
  - use to mark need to restock

no rocket science here!
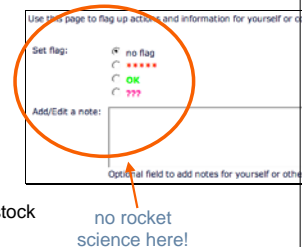
.. so

- you can design for apporpriation

- often seems trivial but really powerful

- needs humility

… and now …

- Web2.0 … community content + mashups
  adoption = appropriation?

- what about end-user mashups
  (not just the techie ones!)
  - e.g. mscape, HP location-aware design framework
  - UI + infrastructure issues (e.g. local resource URIs)

- mashups in the home?
  (hard enough with wires!)
  - not just usability - Green agenda too

summary

- useful and usable not enough
- things need to be used

- adoption   – from no use to use
  - think path
- appropriation   – from use to personal use
  - think enable

- maybe coming together?