Designing to be Used
adaptation and appropriation

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about me

I work in Lancaster
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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

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

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

appropriation
  - getting initially used

adoption
  - getting eventually USED

dynamics of use

personalised use

useful
usable
use
adoption
appropriation
no use
disuse

managing the path

no use

marketing life cycle: ‘early adopters’, etc.
how ‘design’ it in
just think

easy to focus here

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

number of users

benefits

cost

perceived present value
different kinds of people
– market ecologies

![Diagram: teachers, parents, children]

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

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

example – HCI book search

- value for people who have the book
  - 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”!!

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

design guidelines ? ... some ideas ...

- think about the path
- increase zero point value
- identify cliques
- understand relationships
- create community value
- leverage existing products

see also Andy Cockburn’s PhD thesis

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

energy here!
.. so

- you can design for appropriation
- 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?