Mixed Reality Check

Mobile User Experience in the age of Ubiconn

What this is about

- Mobile interaction design trends.

What this is not really about

- Hard-tech, business models.

A note to stay out of trouble

- The content of this presentation reflects my personal opinions, thus the statements made here in no way represent my employer's positions and/or strategies.

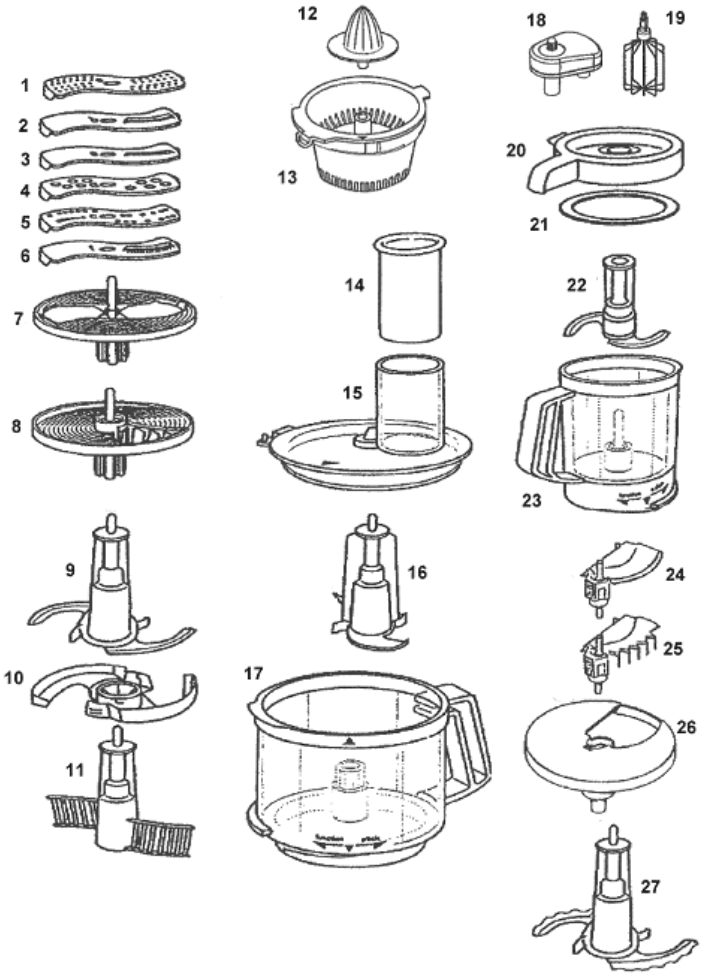
An exercise in visualization. Part 1: Today.

Mobile Connected Devices, circa 2005.

**“Objects aren't simple any more.
They don't just turn or push.
They behave.”**

Peter Merholz, 2004

Days of Yore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Mental associations: match numbers to letters

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A

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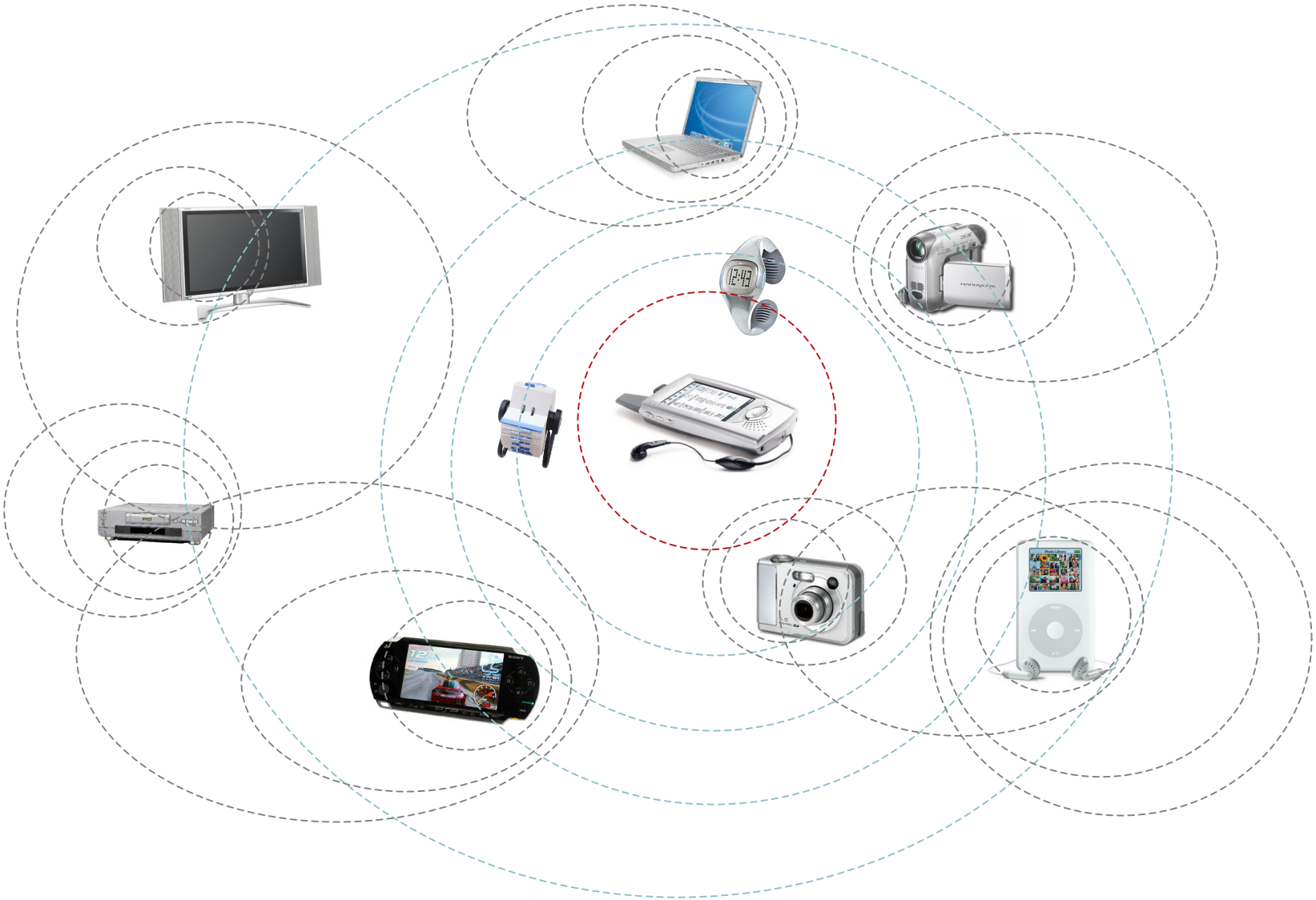
B

Multivergence



Motorola RAZR V3

Samsung X460

Palm Treo 650

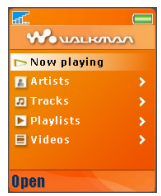
Atoms

- Physiologically small screens.
- Same ol’ keys.

Bits

- The PC metaphor keeps infiltrating.
- UI simulacra adopted from other devices (digital cameras, MP3 players etc.).

Nokia 6680



Sony Ericcson W800i

Content, services & the instant access syndrome

- Today most media-centric mobile products accessed via a browser-based interface exhibit a strongly unbalanced navigation-to-content ratio.
- The concept of “media snacking” implies an immediate answer to a sudden need, but users currently have to work their way through the rigid hierarchical structures of “mobile portals” to find what they want.
- The structure holding the morsels becomes the experience.

In the meantime, elsewhere...

The Internet of things.

“First were mainframes…now we are in the personal computing era, person and machine staring uneasily at each other across the desktop.

Next comes ubiquitous computing… when technology recedes into the background of our lives.”

Mark Weiser, 1988

Ubicomp, Ubiconn, Ubicomm

- A small-pieces-loosely-joined, IP-centric incarnation of Ubicomp is emerging, even more de-structured than originally imagined.
- Meshes of un-wired connectivity keep us and our things constantly tethered to a fluid übernetwork and communicating.
- Welcome to *Connectedland*.

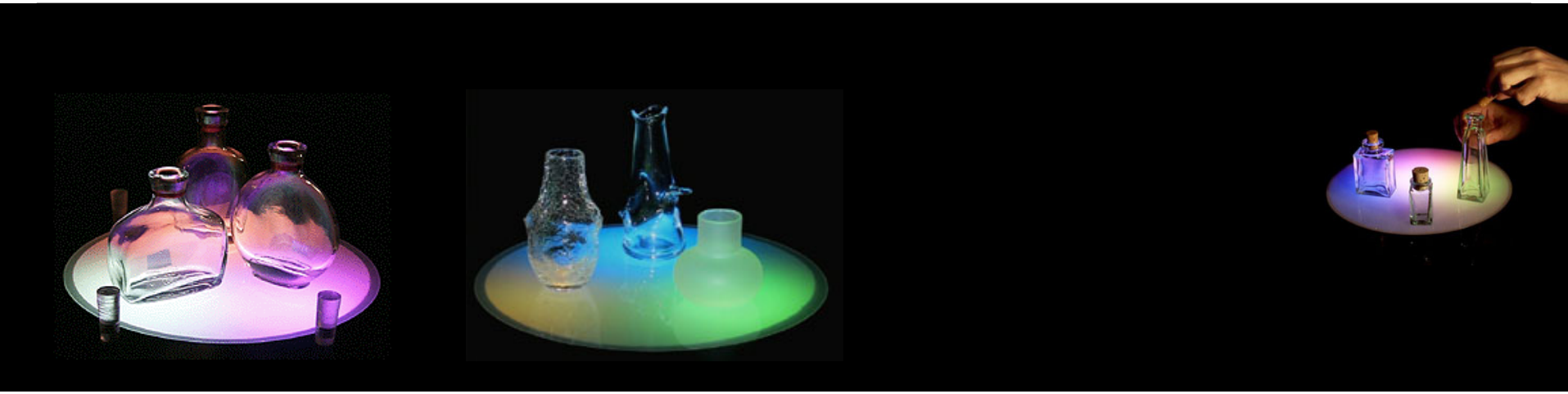
“…we believe that calm technology may be the most important design problem of the twenty-first century...”

Mark Weiser & John Seely Brown, 1995

“Interfaces are pushing us to our physical limits. We cannot detect constant small visual changes.”

Chris Heathcote, 2005

Neo-animism at the turn of the millennium



MIT Tangible Media Group, musicBottles, genieBottles, bottleLogues

Philips Design, Vision of the Future, Emotion Communicators

“… tangible and social computing have been conducted as independent research programs. I believe that they have a common foundation… the notion of ‘embodiment’.

By embodiment, I don't mean simply physical reality but the way that physical and social phenomena unfold in real time and real space as a part of the world in which we are situated, right alongside and around us.”

Paul Dourish, 2001

- The Internet of Things means interaction with digitally-enhanced artifacts ceases to be confined to the limits of a screen.
- Moving things and moving in space will affect the way things and space behave around us.
- The GUI - SUI balance tips in a new direction, integration (finally) becomes the focal point.

Motion & tilt sensors, accelerometers, touch screens...

Sharp V603SH

LG SV360

Nintendo DS

EyeToys for grown-up boys

Sony EyeToy

PlayXone

All your spaces are belong to us

Node Explorer

Place du Molard, Geneve

Yellow Arrow

Young horses, new tricks.

“We might compare the mobile phone to a child that has grown up too quickly, burdened by new responsibilities but with an undeveloped body.

How sad to see this powerful brain locked in a small mismatched body, unable to express its corporeality in a rich way!”

Mobile Embodiments, Interaction Design Institute Ivrea, 2004

A quick summary, two questions

- We struggle with complex devices to access complex services.
- Ubiconnected and ubicommunicating we are increasingly surrounded by tangible objects imbibed with intangible bits.
- **How to enable people to summon the hidden power of those bits, easing and enhancing interactions in the process?**
- **What will be the role played by the “devices formerly known as mobile phones” in this scenario?**

Terminal

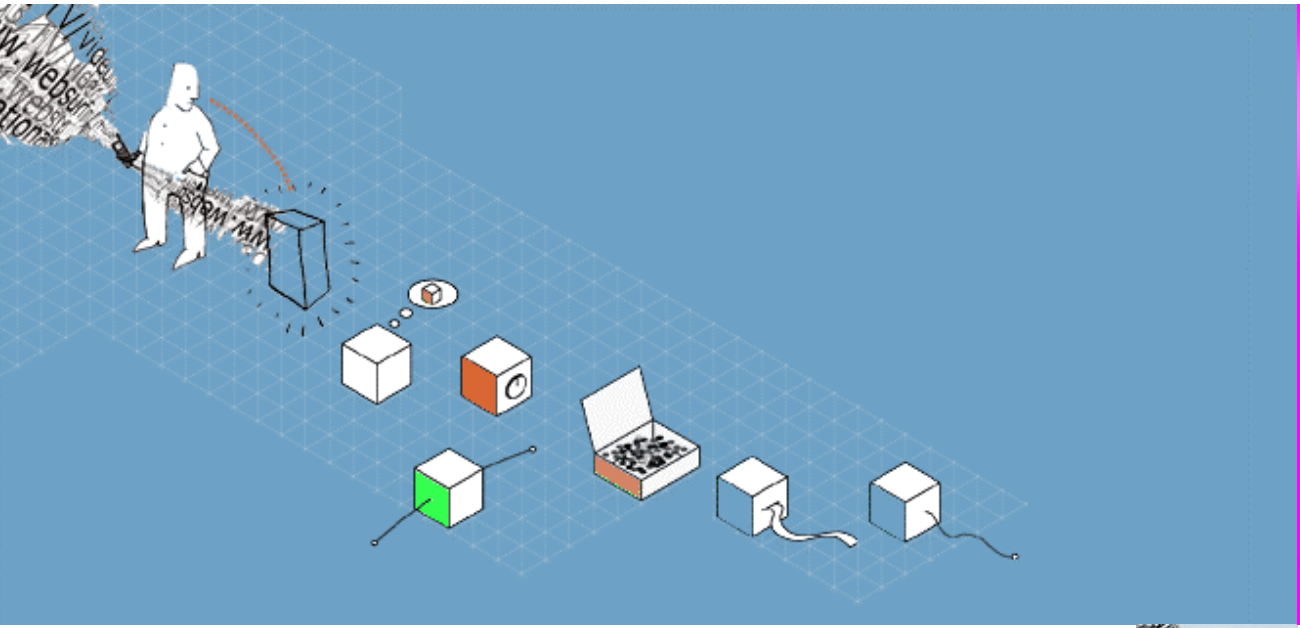
- *A part that forms the end: extremity, termination*.
- A combination of a keyboard and output device (as a video display unit) by which data can be entered into or output from a computer or electronic communications system.

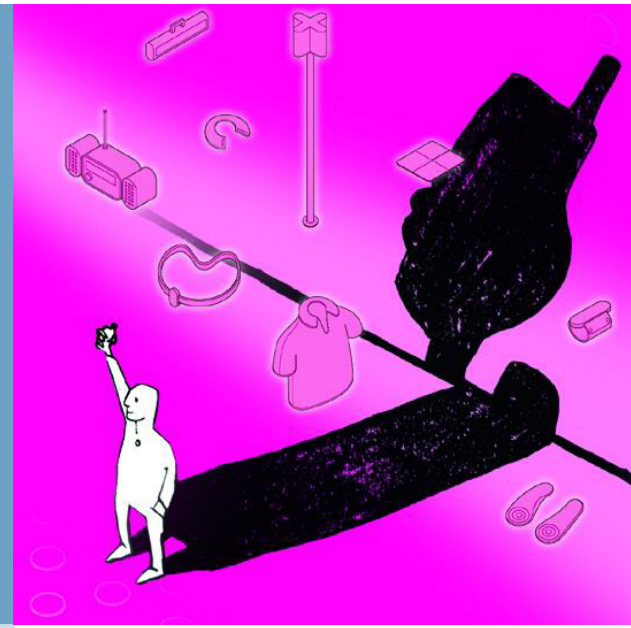
Conduit

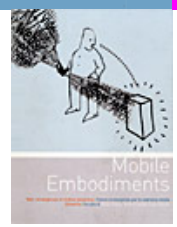
- A natural or artificial channel through which something (as a fluid) is conveyed.
- *A means of transmitting or distributing*.

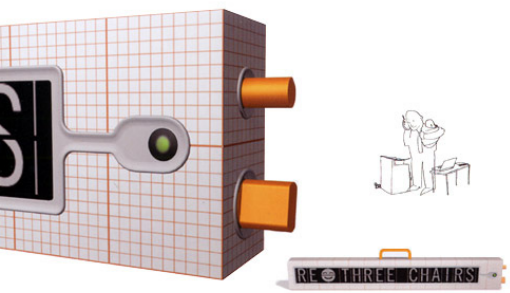
Sony Ericsson
Concept Phone

Mobile Embodiments, IDII, 2002-2004









Just around the corner...

“...I touch a thing and it does a thing...”

Matt Jones, 2004

Near Field Communication in a pinch

- Contact-less card and contact-less reader/writer architecture.
  Radio-frequency-based (13.56 MHz).
- Cards are powered by the reader and can store URLs, text etc.
- Card & reader need to be within centimeters of one another to initiate interaction.

Nokia 3220 with NFC shell

Economic Transactions

- Already being tested the world over as enhancement for various types of cards.

Social Transactions

- Sharing made handshake-easy.

Automating processes

- Macros for the masses.

Location made easy

- You have to *be there* to *be there*.

Shuffling bits

- Download and Drag ‘n Drop go physical.

An exercise in visualization. Part 2: Tomorrow.

Up the road...

Opportunities (challenges)

Embrace complexity, relinquish control

- Perfection is not of this world, accepting it can be fun.

Keep things open and lo-fi

- Let the bees take care of the flowers in your garden.

Your customers, your R&D Dept.

- Enable products to be shaped out of behaviors.

Confirm/Cancel Reality

- Need to collectively preserve Value Ecosystem to avoid overexposure-driven rejection.

Security

- New pastures for data-mining terrorists and phishing pickpockets.

Privacy

- Any incarnation of RFID is bound to elicit *strong* reactions from the public.

On the horizon...

“Any sufficiently advanced technology is indistinguishable from magic.”

Arthur C. Clarke, 1961

From Conduits to Magic Wands

- Today *efficiency* and *effectiveness* end up informing most design decisions...and in many cases rightly so...but leaving people missing a “sense of delight” from their constant interactions with mobile connected devices.

- How to leverage people’s frequent desire to “suspend judgment” and make *drama* the missing ingredient in the recipe?

The mobile phone of the future?

- Embodiment *vs.* Compressed Corporeality.
- Intelligent Mediator *vs.* Dumb Slave
- Calm *vs.* Interruptive
- Evocative *vs.* Descriptive

Stefan Marti, MIT, Cellular Squirrel

Thank you!

www.freegorifero.com/mex/mixedrealitycheck.pdf

fabiosergio@freegorifero.com
www.freegorifero.com

NFC

- NFC Consortium (www.nfc-forum.org)

Books

- “Mobile Embodiments”, Interaction Design Institute Ivrea, 2004
- “Where the Action Is”, Paul Dourish, 2001 MIT Press
- “Digital Ground”, Malcolm McCullough, 2004 MIT Press

Inspiration, respect

- Chris Heathcote (www.anti-mega.com)
- Matt Jones (www.blackbeltjones.com)
- Timo Arnall (www.elasticspace.com)

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