



Concepts and Models for Ubiquitous Computing

Ubicomp 2002
Göteborg, Sweden

Organizers

Alan Dix, Tom Rodden & Gregory Abowd



Agenda

9:00	Overview and Goals
9:15	5 minute madness
10:00	15-minute break
10:15	5 minute madness (resumed)
11:45	brainstorming for discussion groups
12:00	working lunch
13:30	regroup, discussion group definitions
13:45	discussion groups
15:15	break (for real)
15:45	reporting and next steps
17:00	end



Overview and Goals

Well-articulated dreams have inspired dreams and prototypes of ubicomp.

What further inspiration is needed?

Exploration and understanding through use is stymied by development/deployment woes.



An Analogy

mid 60's

Sutherland, Engelbart, Kay (and others) inspired the PC revolution

early 90's

Developing PC apps is (relatively) "easy" and mainstream

early 90's

Weiser, Hopper (and others) inspire ubicomp revolution

mid 2010's

Where will we be? Are we half the way there yet?



What happened for the GUI?

	GUI
Concepts	Interactor/widget Dialogue Direct manipulation Noun-verb/Verb-noun
Models	Interaction <i>(e.g., Exec/Eval, Time-Space, People-Artifact, Instrumental Interaction)</i> Architectures <i>(Seeheim/ Arch vs. MVC, PAC, ALV)</i>
Tools	GUI Toolkits, GUI builders, UIMS



What about Ubicomp?

	GUI	Ubicomp
Concepts	Interactor/widget Dialogue Direct manipulation Noun-verb/Verb-noun	??
Models	Interaction <i>(e.g., Exec/Eval, Time-Space, People-Artifact, Instrumental Interaction)</i> Architectures <i>(Seeheim/ Arch vs. MVC, PAC, ALV)</i>	??
Tools	GUI Toolkits, GUI builders, UIMS	??



Goal of Workshop

Seeds to inspire near-term development of concepts & models adopted by community

Development of agenda for future workshop on this topic

Requirements, set of challenges to address



Speakers

Greenfield

Razorfish, Japan

Aillisto *et al.*

VTT Electronics, Finland

Burke *et al.*

UCLA, USA

Gustavsen

Univ. Oslo, Norway

MacColl *et al.*

Glasgow & Sussex, UK



Speakers

Rehman
Cambridge Univ., UK

Römer & Schoch
ETH Zurich, Switzerland

Sousa
CMU, USA

Rey, Coutaz & Crowley
CLIPS-IMAG, INRIA, France

Borchers & Stone
Stanford & StoneGroup, USA

Hong, Lederer & Newman
UC Berkeley, USA

Alan Dix
Lancaster, UK



Discussion Groups

- Tom's summary
- Let's talk over lunch
- 3 Groups of 5-6



A Simple Division

Externally motivated concepts & models

Human experience

Implementation motivated concepts & models

Programming experience



Other Topics

Generalized models of Input/Output/Interaction

Context

Peripheral/Ambient displays

Uncertainty

Physical/Virtual boundary

Interaction

With spaces-artifacts

Purposefulness of interactions

Continuous interactions