Lone Malmborg
Creative Environments for e-learning

Education and research at K3

Education programs

Research studios

Separate courses

media & comm sc

creative producers

perf art techn

interact design

phys & virt design

design & dig media

imaginee-ring

interact design

Creative Environments

Cultural studies & 'gestaltung'

Narrativity & communicaiton

Space & virtuality

Agenda

- learning & e-learning
  - new challenges
- creative environments
  - interaction between activity, technology and space
- body & technology
  - recapturing use of our body & senses
- a K3 scenario
  - learning everywhere

Learning & e-learning
- new challenges

- Learning (also) takes place outside educational programs
- Learning (also) takes place outside the classroom
- Learning takes place throughout a lifetime
- E-learning is not just internet mediated teaching An example

Research focus of Creative Environments studio

- Design of technology augmented creative environments

- Integration of activity, technology and space – ubiquitous computing

- Collaborative environment for creative, inspirational & learning activities

- Inquires into play and artistic performance in spaces like playgrounds and stages understood as learning environments

- www.creativeenvironments.mah.se

Major research projects
Øresund e-learning

- Hotspot: digital knowledge industry
  - integration of media technology, architecture and learning
  - complex learning environments (labs and designstudios)
  - multi-user environments and learning through shared materials
  - multi-modal (synkinesthetic) and mobile interfaces
  - inspiration from performance and set design
  - design as learning
- Partners:
  - industry (axis / netch, alinea, luvit, courseware, skandia, sigma, studentlitteratur, wm-data) + research (LU, MAH, CBS and II)

Major research projects
Atelier

- EU-project: Malmö, Vienna, Milan, Oulu
- architecture and technologies for inspirational learning environments
- integrated design of the physical space, tangible mixed media, and supporting technologies (interactive tags, displays and mobility tool)
- grounded in observations of creative practices within art, design and architecture

body & technology
recapturing use of our body & senses

- Our ability to develop understanding (imaginization)

- Highly dependent on our possibility to use all our senses (including the synkinesthetic)

- Based on work of phenomenologist philosopher Ole Fogh Kirkeby's work on "Event and body-mind"

- The identity between mind, body and world

Conditions for VR and ubiquitious computing

- In successful VR and ubiquitious computing one cannot presuppose theoretical, reflexive consciousness, but only practical reflexivity: the actor is immersed into the reality in which he exists

- As an epistemological ideal, the digital world should not presuppose a reference to 'another reality'

- Only such consciousness of the body, and such practical consciousness as realized through the media, is able to exist in VR and ubiquitious computing. We *are* the reality that we experience in virtual environments.

Some concepts

- Incorporation
- Situatedness
  - The (system's) sensing of users readiness towards meaning - intentionality. Adaptability to user's intentions
- Imaginization
  - The possibility of creating a readiness in the user that enables him to act in a reality, which means the handling of such knowledge as is capable of creating this readiness. Imaginization is the process of handling knowledge
  - Closeness of interaction. The user's perception of distance to reality. Spatial dimension is an important factor in the visual perception of closeness. Complete incorporation ~ no formalized way of communication

Interface characteristics

IMM and related technologies categorized by incorporation (horizontal dimension) and situatedness (vertical dimension). Agent I is the user and Agent II is the IMM (Kirkeby and Malmborg, 1995)

Incorporation / closeness ->

Situatedness / Way of interaction ->

	Character based, non graphical interface - 1D	Graphical multimedia (audio/video)- interface - 2D	Synkinestetic interface - 3D
Menu- or command-based interaction (agent I's actions restricted)	Presentation of text in 1-D: 'Flat' text	Presentation of text in: Multimedia	Information 'played 3-D: Virtual reality-'film'
Hyper-based one-way interaction (agent I's actions open)	Free choice of text in 1-D: Hypertext	Free choice of information in 2-D: Hypermedia	Free choice of information in 3-D: Virtual reality
Hyper-based mutual interaction (agent I's actions open and coordinated with agent II's open action)	Mutual interaction in 1-D: Text agents	Mutual interaction in 2-D: Hypermedia-agents	Mutual interaction in 3-D: Virtual reality-agents

Possibilities with wireless technology

- Mobile displays
- Passive & active tags for different material
- Tracking & positioning
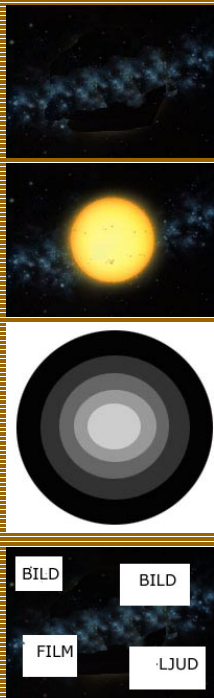- Connecting

Not only ...
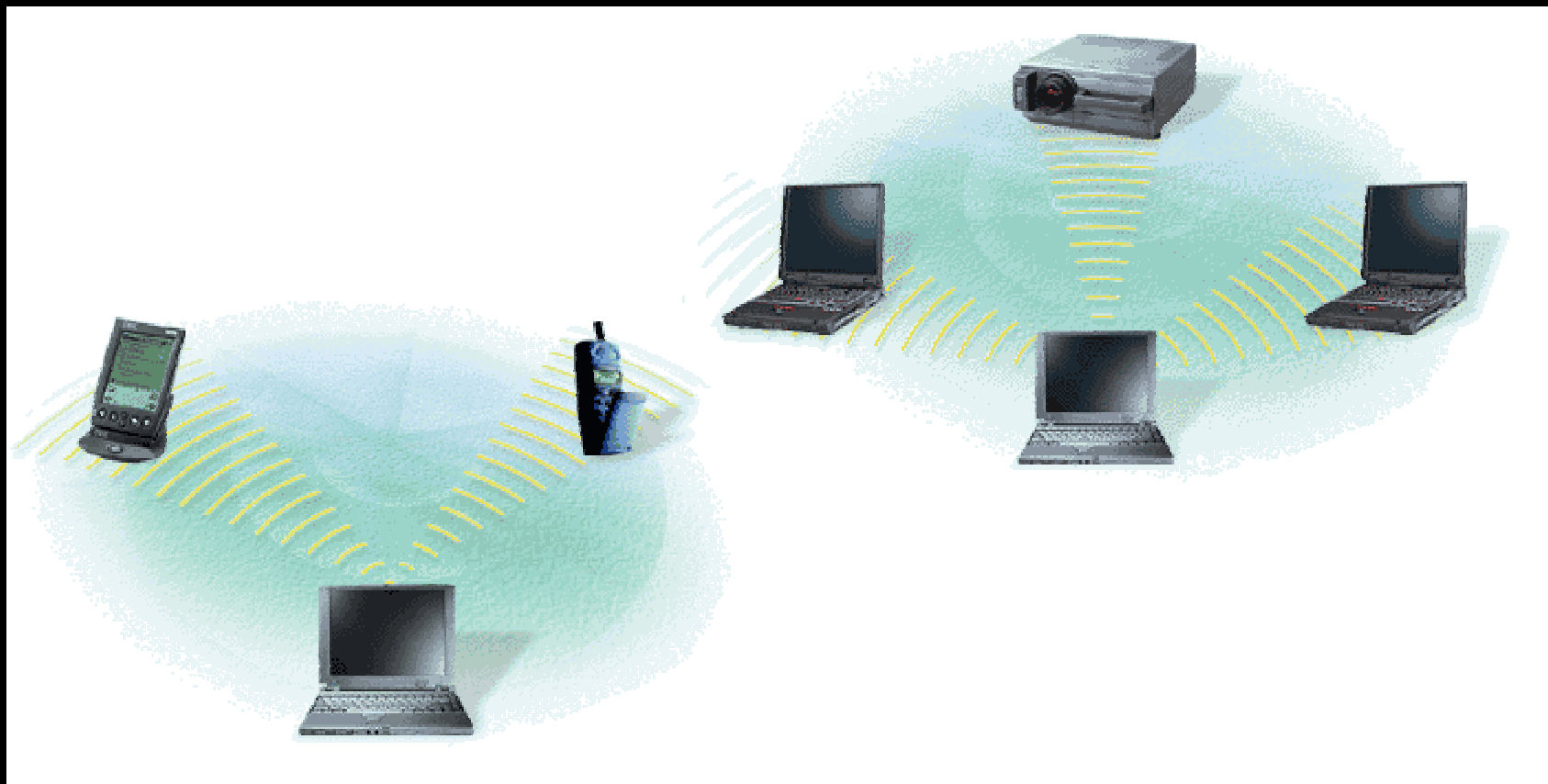
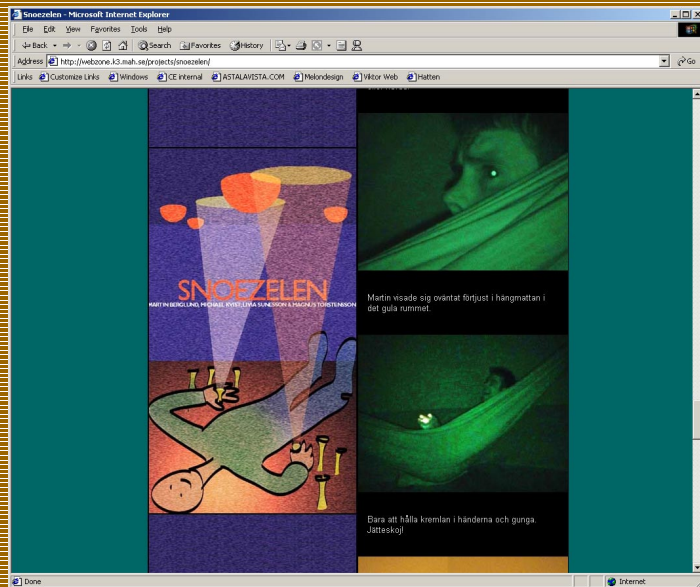# … but also …

Tools for mobile connectivity
- blue tooth

- access points
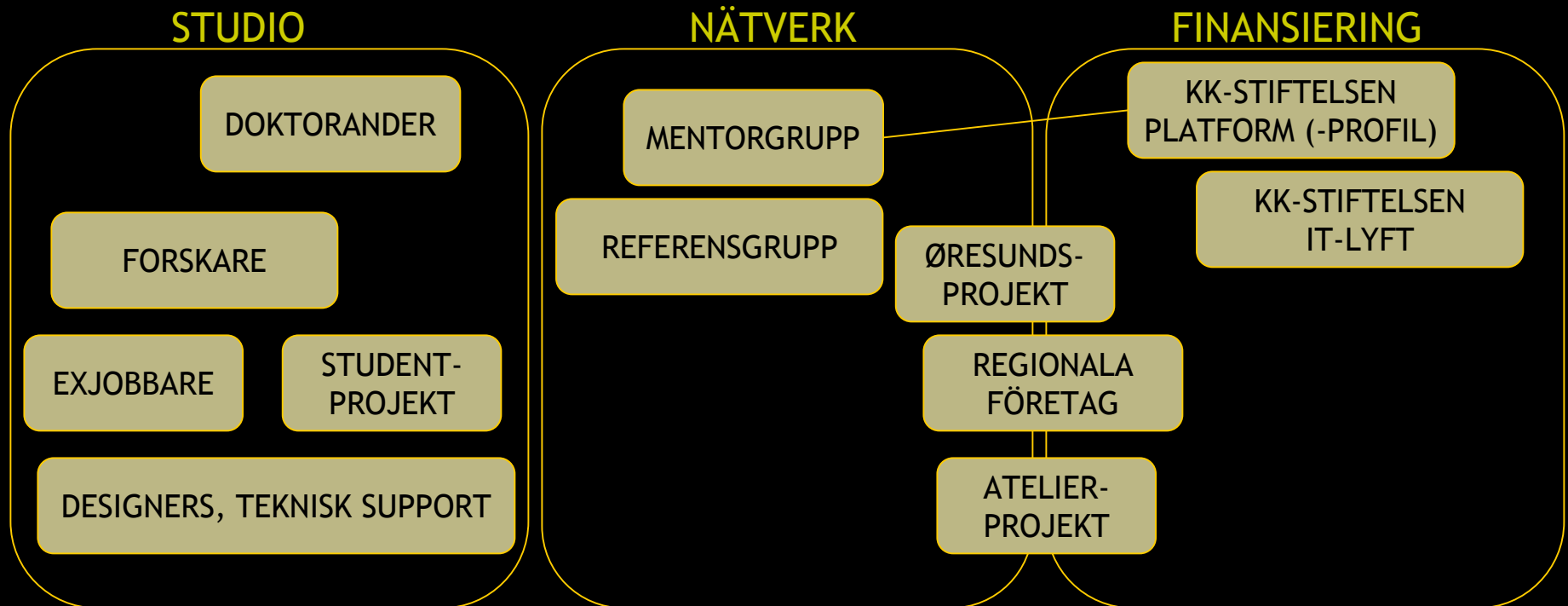- blue tooth units / interactive 'tags'
- combined with positioning system

Snoezelen

Scenario about
hotspot learning possibilities
at Creative Environments and K3

An example
- a Danish 'virtual' education program

FREMTIDENS PÆDAGOG
– en uddannelse i det virtuelle rum

- Kombiner studie og erhvervsarbejde
- Benyt internet som del af dit studie: til opgaver, oplæg, tilbagemeldinger og konferencer - på det tidspunkt af døgnet, du ønsker
- Mød lærere og medstuderende på weekendseminarer
- Oplev dialog og dynamik i en helt ny studieform under Åben Uddannelse

- 'education in virtual space', 'dialogue', 'dynamics'

- based on internet

- computer-mediated contact to teacher / server

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