Context-Aware Ubiquitous Learning

4/4/2013
Guest speaker
Eric Klopfer
Project proposals due next week

1-2 page paper & in class presentation (10 mins):

- what problem are you addressing?
- what is your approach? usage scenarios!!
- why is this interesting? Original?
- how does the approach generalize?
- what do you plan to build & demonstrate?
- what will you/we have learned?
Terminology

“mobile learning” or “ubiquitous learning” can mean:

A. learning anywhere, anytime

B. learning that is situated/integrated with the user’s current context and current environment
Lillypad (Yvonne Rogers)
The LillyPad project is investigating how mobile collaborative technologies can be designed to support and augment integrated inquiry processes both indoors and outdoors. Our approach is to enable students readily and meaningfully to switch their attention between physical activities in the field, digital interactions with a mobile computer and the collaborative interactions taking place in a group setting. In particular, we are developing mobile collaborative tools that can facilitate the fluid movement between observing what is in the physical world, collecting and recording real data in a database, comparing this with previously stored data, analyzing it using visualizations, and using this to generate hypotheses and draw conclusions that can be tested in the field. In so doing, our aim is to enable students to be able to practice more integrated inquiry processes; encouraging them to begin to synthesize and reflect more upon their various inquiries in both physical and digital worlds, and be able to communicate this to their peers and teachers in novel ways. (2004)
Lillypad (Yvonne Rogers)
TouchStone (Burns & Lieberman)
Aurasma (Matt Mills)

TED talk video
Context-aware learning (Yang)

• identifying learners' surrounding context and social situation

• to provide integrated, interoperable, pervasive, and seamless learning experiences.

• learning at the right time and the right place with right resources and right collaborators
YANG’s 8 characteristics for context-aware learning:

- **Mobility**: The continuousness of computing while learners move from one position to another.
- **Location awareness**: The identification of learners’ locations.
- **Interoperability**: The interoperable operation between different standards of learning resources, services, and platforms.
- **Seamlessness**: The provision of everlasting service sessions under any connection with any device.
- **Situation awareness**: The detection of learners’ various situated scenarios, and the knowledge of what learners are doing with whom at what time and where.
- **Social awareness**: The awareness of learners’ social relationship, including what do they know? What are they doing at a moment? What are their knowledge competence and social familiarity?
- **Adaptability**: The adjustability of learning materials and services depending on learners’ accessibility, preferences, and need at a moment.
- **Pervasiveness**: The provision of intuitive and transparent way of accessing learning materials and services, predicting what learners need before their explicit expressions.
Imagining the future of learning (Tom Nguyen)

CHUM video
Focus for Today: Mobile Games for Learning

- Guest Prof Eric Klopfer, MIT’s Scheller teacher education program