Beyond the NetLab
how to involve the community producers

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The *laptops for all* project

- the laptop as a pre-requisite for entry university
  - minimal specs for freshman, including software
  - for many, it's their first owned machine!
- University develop a local area network
  - entry points: classrooms / libraries / social spaces
- multiple operation environments and a complete set of Intranet/Internet network facilities
  - there's a 1 to 8 ratio of entry points to laptop owners
The NetLab concept

- network infrastructure, content oriented
- links computer resources
- experimental education lab
- entry points to virtual campus
- prototype for a local information society
- emphasis interpersonal communication among students
The NetLab potential

- offer a local interaction engine;
- people-centered and not technology oriented;
- strong reinforcement on mobility;
- designed to enhance the involvement between students and university by sharing of technology investments
- permit reallocate the tools use for information manipulation from classrooms to all spaces in campus

**The killer application of the 90s is people**

Pavel Curtis
Get the potential users involved

- teachers have a crucial role in the technology adoption with research results reporting a strong correlation between *curricular relevance* and *teacher interest*

- a proposal for teachers involvement
  - start using ICT in the development of their own learning materials;
  - take advantage of the laptop and network in their own classes;
  - use the network to communicate with students and other teachers;
  - become publishers and permanent developers of on-line material.
• need for a strong support to be effective
• area of fast change and great setup costs
• four questions arise when dealing with ICT to harness the NetLab:
  – connections: how can computers intelligently connect information seekers to sources?
  – utility: how can information access be complete, correct (precision), timely, transparent, authorised and secure?
  – system evolution: what architectures can best leverage rapidly changing information environments?
  – collaboration: how can groups of people and computers co-operate effectively over distributed networks?
• most of the teachers who use Web facilities tend to post information as a complement to the more traditional media, because this:
  – means to learn other skills (technical ones)
  – requires a different kind of institution support
  – represents an enormous time investment, not normally considered as a pay work to the institution.

• we consider the laptops use in classroom as a gradual evolution force to the teaching activities, but just in the long run
Conclusion remarks - teachers

- need for better tools to support information and teaching materials as some form of technological scripts similar to the ones encountered in textbooks
- before the use of "compubooks" or "digitalToolBooks" be seem as a potential resource to the teachers activities, some specialised work force (like publishers do in books) need to produce specific materials
- its seems that still a point stays the same: the teachers are largely facilitators and performers, not creators
Conclusion remarks - students

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• the laptop presence in classroom, change the power relationships between teacher and students
  – the teacher provide guidance but do not control the sequence of events that take place;
  – the relation one to many, between teacher and students is now a many to many relationship, where students interact and the teacher acts as a regulator;

• the differences between students involvement (and results) become even more visible
Virtual environments in higher education

• design a clear framework to be used by all potential users
• provide technological support
• produce content and reuse, reuse, reuse!
• keep it simple and add functionality just by demand
• more people, different people, the better!
• publishers and creators must have some sort of benefit
• less differences between the teacher and student roles
any phenomena

• the amount of information available about *anything*, *anywhere* and *anytime*, accessed from *everywhere* in huge amounts makes impossible to *anyone* to maintain a global knowledge, even in a restricted area, on an individual basis

• information society means a society where interaction (co-operation) is predominantly digital based?

• share, participate and produce will be dominant activities when passing from *stock-knowledge* to *flow-knowledge*
To do list

• explore the NetLab environment
• develop a Java based platform to generate content containers
• explore the *any phenomena* to develop context generators, based in CSCW concepts and information visualisation techniques
• expanding NetLab concepts to use on DLT situations (contexts?)

*the CEREM group is open to participate into joint projects with other R&D groups*
The NEED as a base for everything
(the “no free lunch” issue)

GLOBAL context, LOCAL focus

Wisdom is socially constructed
Web stuff

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- Web references for education, learning and training:
  http://www.ufp.pt/staf/lmbg/edu_pointers.htm