

## Message from the Program Chairs

SW-WL'03 is the first edition of the workshop "Semantic Web for Web-based learning. Implications in the area of educational information systems ». The emerging Semantic Web presents exciting new possibilities for uses of learning technology. The SW-WL'03 papers include papers that are primarily concerned with topics on applications of the Semantic Web technology for education.

In section 1 (only abstract available), Dr. Martin WOLPERS from the Learning Lab Lower Saxony, as our invited speaker will present a talk entitled "**Towards P2P-based information systems for E-learning using semantic web technologies**". His current research interests focus on peer-to-peer networks, information systems, semantic web, adaptive hypermedia systems and knowledge management. Furthermore he is the project manager of the international project "Personalized Access to Distributed Learning Repositories".

Then, we split two main sections for the different papers.

In section 2, three papers are discussing about models, concepts and ontology for the authoring process.

In their paper "**Process-aware Authoring of Web-based Educational Systems**" Lora AROYO and Riichiro MIZOGUCHI discuss how current Semantic web concepts can be beneficial for the authoring support of Web-based educational systems (WBES). With a semantic perspective on the knowledge representation within such systems, they explore the interoperability between the various ontological structures for domain and instructional modeling and the modeling of the entire authoring process. They present design principle of the ontology-based framework for authoring support of WBES.

Amel Bouzeghoub et al, "**A model of reusable educational components for the generation of adaptative courses**", aim at providing an environment of authoring and presentation of pedagogical multimedia contents adapted to the end-user. This environment must increase the productivity of the teacher by supporting the re-use of contents already developed in other contexts (by him/her or others). This goal is achieved by means of a model of educational components. They define a set of constructors used to build courses by assembly of components. The courses thus defined are then instantiated for each learner according to his/her profile. To classify component the approach use ontology to describe the domain model, where each node represents a domain concept.

Stefan Hoermann et al., "**Building Structures of Reusable Educational Content Based on LOM**", show that in a learning system LOM can be used to map the structure of courses. The necessary extension of the aggregation level is introduced. The description of the courses created with LOM allow for the reuse at all levels. Rhetoric didactic relations between the learning objects are also stored in the LOM records and support adaptivity.

In section 3, papers focus more about knowledge representation.

Hana Bensalem and Tahar Bensebaa, "**Towards a Distributed Pedagogical Simulator**" demonstrate that one of the essential repercussions of the construction of a pedagogical simulator is the perennisation of the 'know' and especially 'know-how'

held by the human experts. This deals with an expert system, 'kernel of the simulator', able to diagnose and detect faults, as well as to describe scenarios of maintenance. Their major concern is to take into account the diversity of the types of knowledge held by the human expert, because they tend to be procedural (functional) or declarative, founded on a confirmed theory or a simple experience lived by the expert. The discovery of knowledge representation formalism, able to take into account this diversity, is one of the conditions of the future success of the artificial intelligence. Whatever the formalism of representation selected, it is worth answering the question 'to which level of detail must one go to represent the world? .

Enrique Alfonseca and Pilar Rodríguez , **“Extending an on-line information site with accurate domain-dependent extracts from the World Wide Web”**, describe a new procedure that has been developed for extending an existing on-line information system about *The Voyages of the Beagle* with information collected automatically from Internet. A Term Identification procedure finds relevant terms in the document; and the algorithm uses conventional search engines (such as Google) to look for pages about those terms. Next, a sequence of filters rule out all the information considered irrelevant, and the remaining data is put together in “*summary pages*” available to the students.

P. Pompidor et al., **“Within the Framework of Course-assisted Creation, an Incremental Method to Extract Relevant Information from the Web and Integrate it in a Course Draft”**, have developed a prototype whose goal will be to enrich an ontology of teaching concepts. To do that, they automatically query search engines with key words extracted from pages that were previously analysed (beginning with an ontology which treats on a hierarchical basis the first keywords). This analysis (lexical, syntactic and semantic), targeted towards the extraction of definitions ("this concept-X is a ...etc.") and of specializations ("this concept-X comes in ...etc."), is based on the exploitation of a base of syntactic templates automatically learned from the analysis of definitions of several on-line dictionaries, and from a minimal dictionary (in particular to treat synonymies). The ontology thus created finally generates a course draft that must be "finalized" manually, in spite of the use of a few subroutines for knowledge synthesis.

We would like to express our thanks to all the authors who contribute to this first edition.

Many thanks to all the members of Program Committee who have very carefully reviewed the submitted papers.

We would like to express our thanks to institutions actively supporting this event, namely :

- PC-Soft
- The Caise'03 Workshop organization

*Marie-Noelle Bessagnet, (Pau and Pays de l'Adour University, France)*  
*Michel SALA, (Montpellier I University, France)*