

Whereas some research has begun to describe the role of graphical tools supporting decision-making and the construction of knowledge, the role of tools that help tutors to visualize discussions (“awareness tools”) as an aid for their moderating tasks remains an open question. Moreover, tools capable of issuing recommendations (or the friendly presentation of complex data, conveying implicit “advice”) to moderators (and students) to achieve more effective discussions have not been developed to any satisfactory level.

To fill these gaps, in ARGUNAUT we:

- **study** how tutors use visualizations to intervene in graphically represented (“mapped”) e-discussions and other computer-supported collaborative activities;
- **define criteria** according to which these discussions can be assessed and improved; and
- **develop a computational environment** that, based on records of past discussions and additional information, supports the work of online course moderators and help them to improve their practice.

The novel tools will initially work on **two existing discussion-supporting platforms** – the results of past EC-sponsored projects: The Digalo tool, developed in the DUNES project (IST-2001-34153, <http://www.dunes.gr/>), and Free Styler / Cool Modes, developed in the Coldex project (IST 2001-32327, <http://www.UDE.info/>). A careful architecture design, however, will allow for **openness and adaptability** of ARGUNAUT components to a wider range of platforms and environments.

Deep and shallow waters

Description and technological content

The seven partners of the ARGUNAUT consortium are in charge of the design of the new methodology and tools, their implementation and evaluation, the underlying pedagogical/cognitive/computational research and the dissemination efforts. The work is structured in eight work-packages, the core of which covers a detailed requirements analysis, the specification of protocols and interfaces, the design, development and prototyping of the system - with its “shallow loop” (online, in which existing awareness indicators are used to provide “on-the-fly” contextual feedback during e-discussions) and “deep loop” (an off-line analysis mechanism based on machine learning techniques, which takes human-annotated and selected examples of mapped discussions held in the past and generalizes them to indicators which can in turn be used for awareness feedback) - and a comprehensive discourse analysis, including the determination of relevant discussion quality criteria for use in the development work. The multi-disciplinary tasks involved are linked by a continuous and closely monitored feedback process, intended to minimize risks and to assure an effective and timely accomplishment of the project goals.