

ESMEE - Earth and Space Multimedia systems Enhancements and Extensions



Applications: Distance Learning

"eLearning aims to support and coordinate efforts and to accelerate the adaptation of education and training systems in Europe."

Viviane Reding, Commissioner for Education and Culture



PRIME CONTRACTOR:

Clio s.r.l.
Via 95° reggimento fanteria 89
73100 Lecce LE
Italy

CONTACT Clio s.r.l.:

Gabriele Conte
Business Development Manager
E-mail: Gabriele.Conte@clio.it
Phone: +39 0832 344041
Fax: +39 0832 340228

PROJECT PARTNER:

University of Lecce (Italy)

PROFILE:

Clio s.r.l. (Clio) and the Networking Laboratory of the University of Lecce (UniLE) developed, integrated and operated, from 2000 through 2002, a satellite e-learning platform offering the following services:

- synchronous audio/video delivery of lessons by satellite channel
- synchronous teacher/student textual chat interaction by terrestrial channel
- asynchronous audio/video delivery of lessons by terrestrial channel.

The service has been delivered to academic and corporate user groups. The operations identified some specific customer requirements and highlighted some platform shortcomings. Therefore in 2002 the partners presented a proposal for enhancements and extensions to the existing platform (under the name of ESMEE: Earth and Space Multimedia system Enhancements and Extensions) in reply to an ESA invitation. The Agency granted support for the development, implementation and execution of preoperational ESMEE activities.

Academic users expressed the need for a richer experience on both the teaching and learning sides. Hence, teacher-driven synchronous browsing capabilities and a multicast whiteboard were developed, integrated and validated under representative working conditions.

Corporate users expressed the need for a more friendly and secure platform. Hence, a web-based interface and privacy guarantee and attack prevention capabilities were developed, integrated and validated under representative working conditions.

Some key features were added to the core architecture in order to make the whole system more effective and efficient, including the development of a QoS (IntServ) policy for terrestrial segments, the development and implementation of an advance reservation of terrestrial and satellite resources, and the development and implementation of AAA (authentication, authorisation, accounting) policies.

Even though the enhancements and extensions developed were applied to the partner's existing platform, they can be integrated into any existing platform based on the same open standards. The activities performed from 2003 through 2004 led to a more complete platform able to offer a better user experience than the previous one.