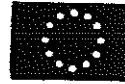


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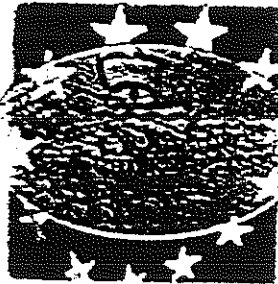
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EURO-MED NET 98



4-7 March 1998 - Nicosia, Cyprus

EURO-MED NET 98 CONFERENCE

Role of Internet and the World-Wide Web

in developing the

Euro-Mediterranean Information Society

SUMMARY PROCEEDINGS

4-7 March
1998

Hilton Hotel,
Nicosia, Cyprus

A Conference on the Euro-Mediterranean Information Society organised in the framework of the Euro-Mediterranean Partnership

4-7 March 1998
Hilton Hotel, Nicosia Cyprus

Hosted by
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Cyprus Government Planning Bureau
Cyprus Department of Information Technology Services

EURO-MED NET 98 CONFERENCE

Role of Internet and the World Wide Web in developing the Euro-Mediterranean Information Society

The Euro-Med Net 98 Conference is a direct follow up of the Rome Ministerial Conference, May 1996, where the Ministers from European and Mediterranean countries gathered, decided that a specific conference on the potential of the Internet and the World Wide Web within the Euro-Mediterranean partnership was required. The need to further strengthen the international cooperation in the field of global networks, such as the Internet, has been recently reactualised by the Bonn Ministerial Conference, July 1997. The Cyprus Conference aims to be the embodiment of these two calls for stronger international cooperation.

For the most up to date information on Euro-Med Net 98 see the home page at <http://www.euromednet.ucy.ac.cy>.

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The Role of Digital Libraries in Network-Based Training

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auto
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Digital Libraries and Network-based Training are important technologies which are increasingly popular due to the widespread availability of computer networks, in particular, Internet. This paper addresses the issue of the possible benefits that the introduction of digital library technology may bring to network instruction systems, both at the level of students and course authors. This work is based on the experiences gained in our involvement in the 'Progetto Mediterraneo: Ricerca e Formazione per i Paesi Terzi' (Mediterranean Project: Research and Training for Developing Countries).

Distance education today with the current development of Internet technologies can contribute to face the training problem. The distributed computer technologies and the telecommunication infrastructure already available can be used to overcome these problems and establish new ways of communication. The functioning framework on which Distance Education is based relies now on new capabilities such as distribution, interaction technologies using multimedia and an easier delivery system. The interactive capabilities of the WWW permit student-student and student-teacher interaction through a variety of formats and this allows for more immediate feedback to student and teacher regarding the learning advancement process. Furthermore, the multimedia capabilities provide an easy way of presenting material to fit educational goals. Current web tools supporting distance learning are developing environments, interactive and fully integrated, allowing students and instructors to be active participants: they can represent in perspective a fruitful field for further technology integration.

In our recent work within the 'Progetto Mediterraneo', a series of web tools have been examined. Some comparison tables properly compiled helped us to be acquainted with web based training features taxonomy. Capabilities were distinguished according to the kind of users to whom they were devoted (students, instructors, administrators) and to the CMC (Computer Mediated Communication) technologies to be employed (synchronous, asynchronous sharing).

We consider that the availability of products offering the basic capabilities to support web based training and the degree of their usability guaranteed by running applications, are an effective premise for the launching of a web based training experimental stage within the Mediterranean Countries context. In a research perspective, a more accurate analysis of web tools and features leads to an interesting new direction of investigation. Since the increasingly wider use of digital library systems is leading to a situation where world-wide educational material can be viewed and queried as a global distributed archive interconnected by communication channels, based on Internet, an obvious question can be posed: how can digital libraries research efforts improve web based training capabilities?

Digital libraries research concentrates on how to develop the necessary infrastructure to effectively manipulate the information on the net. We now have information sources scattered throughout the Internet. Finding appropriate sources of information on the Internet increases the difficulty as the volume of available data grows and the number of Internet users and information providers increases. The process of using a digital library involves searching across distributed repositories, and distributed

searching involves federating in a way that makes them as one organized collection: better searching capability relies on sophisticated indexing methodologies (metadata), and the active research is how to approach semantics and map content or meaning across collections.

To involve web based training in a digital library logic means to look to the lecture repositories world-wide distributed as to a virtual federated collection of lectures (each collection devoted to a topic) capable of across-search by means of suitable indexes. To achieve this goal the same procedures performed for document collections (reports, books, journals) must be followed, using different specifications (metadata, terminology). Experienced technologies, (such protocols) could facilitate the work. How does web based training framework come more efficient using this organization and his features improved by the enlargement of the searchable space?

When we analyzed the web tool features we considered the opportunity to outline in a table the essential requirements of a network-based system running today, and matching the most common user's needs. Among users we distinguished those relating to the students, the instructors, the administrator. Among features we gave particular attention to those relating to authoring, student tools, feedback, progress tracking and testing. Examining authoring aspects we paid special care to the products giving all facilities to the author in the creation phase of the course. Sophisticated lesson builder are now active, enabling instructor with minimal technical expertise to create and manage a course focusing on teaching, not on computer skills. Instructional guidelines facilitate to compose and modify content of the courses, and freely export and import them or part of them from course to course. Intuitive interfaces for web page creation, frame-based, are available and lesson pages can contain elements such as graphics, texts, quizzes, discussion forums, and linked file.

Authoring creation phase concerns, therefore, other aspects. At first the ability of the author to incorporate in the lecture his educational understanding and to manages all the knowledge he has acquired, filtering concepts and experience; but it is also the phase of doubts, of verification and up-to-date need. Querying on-line for information, for specific information relating to questions and problems arising just meanwhile he writes and to be able to receive a range of pertinent answers, directly to his desktop, it is a thing that doesn't happen today. When the instructor plans a course he has to resolve a variety of problems, strictly interwoven, requiring both creation and organizational skills: an overview of system capabilities helps him to manage them correctly. We think, therefore, that beyond the very important aspect of the technological way to solve problems (web based training), there should be a structured information level (educational digital libraries) that could improve to state them. We refer in practice to the need the author feels to reach information on how others in other sites have solved some problems; how others did in presenting information, how others in other sites have composed and structured a course on the same topic etc. To retrieve, just in time, an answer, to employ or manipulate the information the answer contains, to transmit it, can accelerate the dynamism of education and vitalize the role of the educator.

Digital Libraries can also be effectively used in order to improve the quality of the training course for students. Indeed, part of the didactic material can be maintained in specialized repositories in the World Wide Web and accessed through the indices used to classify it. When new material is added to these repositories, students will have, through the distance learning application, immediate and transparent access to it.

This approach represents a quite new field of investigation and a suitable way of collaboration among web based training and digital libraries technologies.

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