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## **ATI Portal for Technology Enhanced Learning**

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**Abstract:** The presented paper describes development of Advanced Training Institute (ATI) portal for Technology Enhanced Learning (TEL). The ATI portal is an interactive tool presenting FP6 NoE Kaleidoscope project competences to potential users - people who want to receive training for achieving the competences shown. The main purpose of ATI is to establish an efficient broadcast/response mechanism to propagate specific TEL request to the Kaleidoscope community and to identify existing matching competencies and to set up the appropriate tools to navigate through competencies and groups, making them available to external interest groups, as well as to Kaleidoscope.

**Keywords:** Web portal, Technology Enhanced Learning

### **1. Introduction**

Kaleidoscope [1] is a Network of Excellence which brings together European teams in technology-enhanced learning. Its goal is to integrate 76 research units from around Europe, covering a large range of expertise from technology to education, from academic to private research. Altogether, it is a community of more than 800 researchers in 23 countries which have joined in their efforts to develop new concepts and methods for exploring the future of learning with digital technologies.

In the 21st century European knowledge-based economy, learning is mobile, social, and multicultural. Kaleidoscope places the learner at the centre of a multidisciplinary research perspective, with theoretical foundations in the cognitive and learning sciences as well as in computer

science and technology design. In order to be competitive, Kaleidoscope is focusing on a strong practical orientation, based on rich learning experiences.

## 2. Advanced Training Institute

Advance Training Institute (ATI) is the third element of Kaleidoscope backbone. It aims at building a sustainable organisational, management and technology infrastructure in order to successfully perform the advanced training activities at a world level of excellence.

The main ATI objectives are:

- ◆ Centralise training and consulting responding to external explicit demands via establishing an efficient broadcast/response mechanism to propagate specific TEL request to the Kaleidoscope community and to identify existing matching competencies.
- ◆ Centralise Kaleidoscope training offer and publicise it using appropriate tools to navigate through competencies and groups, making them available to external interest groups, as well as to Kaleidoscope.

ATI acts as an "interactive portal" - human supported service, which aims to identify and offer Kaleidoscope competencies to potential interested groups - this as a first step to initiate consulting and flexible tailored training activities to these groups of interests, involving expert members from Kaleidoscope (fig. 1):

- ATI receives specific TEL service requests and mediates them to Kaleidoscope (KAL) members
- ATI identifies Kaleidoscope training and consulting competencies and offers them to potential interested groups.



Fig. 1 ATI Objectives

ATI aims at mediate customized TEL training and consultancy as a kind of active ('push') dissemination strategy by targeting an audience

including teachers, TEL experts, Human Resources managers, policy makers, researchers in other areas. Thus the Kaleidoscope achievements could reach diverse target groups which could influence the educational developments in different communities, institutions, companies, and countries. Such activities will be initiated by establishing direct working cooperation lines with the above mentioned audiences by using different channels to access them. ATI uses three main channels – working packages (WP) inside Kaleidoscope in order to identify the expectations and needs of groups interested in Kaleidoscope research outcomes: WP3 Academy-Industry Digital Alliance (AIDA), WP4 Users' Group, as well as WP8 Dissemination. ATI should be the interface facilitating and mediating Kaleidoscope answering to these external groups.

A special objective of ATI is to satisfy requests from the New Member States (NMS) and Accession Candidate Countries (ACC) in order to address the existing TEL gap between EU-15 and them, and thus to respond to the EC policy of Enlargement [2]. ATI aims to strongly support implementation of the Kaleidoscope integration policy towards these countries.

ATI aims at spreading out the Kaleidoscope excellence in TEL towards other EC projects and initiatives which need TEL related competencies and expertise, such as running projects from other strategic objectives of the 6FP Programme, Erasmus projects, eEurope related projects, national TEL projects, etc.

### **3. ATI Web Portal and Brokerage Services**

ATI starts as a simple human supported interactive portal and in a long term vision it will evolve into a virtual organisation with main tasks:

- To identify and match-make (broker) the Kaleidoscope competencies to potential outside requests
- To ensure organisational, technological, methodological and appropriate training/consultancy delivery, mediated through the common project resources.

In order to achieve these tasks ATI Web portal (Fig. 2) [3] has to support the following features:

- To establish ways to present and describe the Kaleidoscope relevant competencies.
- To build a useful classification structuring the TEL competencies available in the Kaleidoscope project.

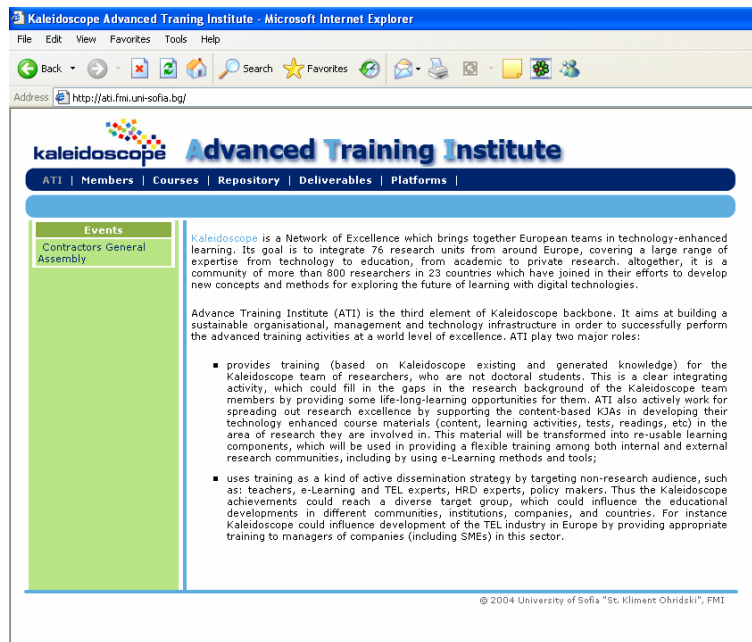


Fig. 2 ATI Web Portal

- To set up the appropriate tools to navigate through these competencies and groups, making them available not only to external Kaleidoscope interest groups, but also to other Kaleidoscope Joint Activities (KJAs), and especially to WP34 Communication and Collaboration infrastructure (CCI), WP8 Dissemination, WP3 AIDA and WP4 Users' group, so they can use them and adapt them in order to convey messages to industry and TEL users.
- To suggest some concrete training scenarios in order to attract interest groups and present them the potential offer.
- To develop and install a mechanism to update the competences profiles.
- Evidently, such an interface could also be used for valorisation purposes, and will fit into the Kaleidoscope common infrastructure and services offered by the backbone.
- To identify through case studies the needs concerning consulting and tailored training in TEL areas, and match

them with the existing competencies in the Kaleidoscope NoE.

- To establish an efficient broadcast/response mechanism to propagate external request to the Kaleidoscope community and to identify and match existing competencies.

The ATI activities (fig. 3) will be implemented through Kaleidoscope distributed network of organisations and/or researchers.

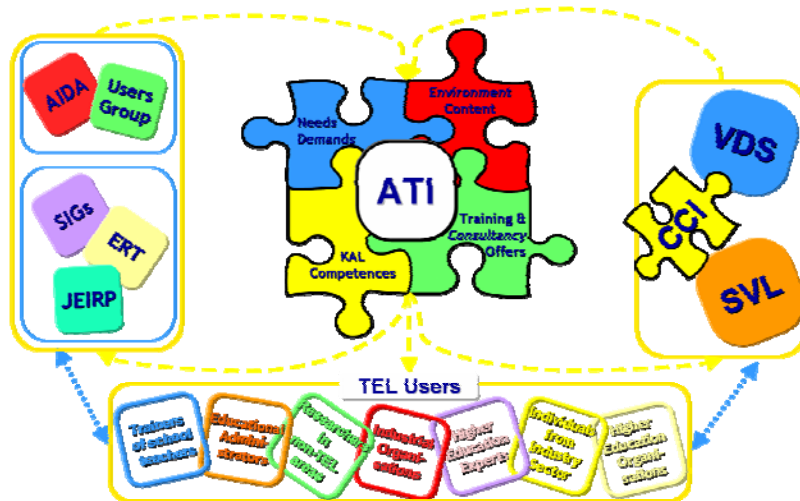


Fig. 3 Advanced Training Institute

ATI mediated training/consultancy can be provided both face-to-face (including by special workshops, tutorials or seminars at some TEL related events), and on-line. ATI activities will be strongly linked with the Dissemination KJA and will make dissemination more active and interactive with already established communities of interests.

As a bridge between Kaleidoscope and the outside world ATI will mediate specialised TEL training to various target groups outside Kaleidoscope, based on the competencies and the results accumulated inside Kaleidoscope through the project's KJAs.

The ATI target groups will be identified and approached in cooperation with other Kaleidoscope Backbone and Transversal activities, such as WP3 AIDA, WP4 Users' Group, WP8 Dissemination, WP6 Virtual Doctoral

School (VDS), etc. Potential target groups are: trainers of school teachers, educational administrators (general, vocational); researchers in non-TEL areas; higher education organizations and experts; industrial organisations and individuals from industry sector; etc. Some priority will be given to other EU projects consortia which need flexible tailored training and consultancy in TEL.

#### **4. Cooperation with other EC Projects**

One of the priority tasks of ATI is to establish collaboration with other EU projects consortia which need flexible tailored training and consultancy in TEL, e.g. in projects which contain a TEL component, such as the 6FP projects INTEROP (NoE), GUIDE (IP), PRIME (STREP), COMIST (SSA); PARCEL (SSA); Erasmus European Thematic Network for Doctoral Education in Computing (ETN DEC), etc. ATI will aim to achieve a common framework of cooperation with such projects, e.g. an agreed proposal for description of work between Kaleidoscope and each of them and submitted for approval at projects' steering level.

The concrete actions with these projects include:

A1. Needs analysis.

ATI will provide a questionnaire to be used for identifying the needs of these projects members. Another instruments used are interviews and case-based analysis.

A2. TEL strategy, action plan and e-learning training implementation.

ATI defines a strategy and action plan for providing ongoing support (training and consultancy) and provides a focussed training and consultancy of a core group of the projects members.

A3. Designing and implementing e-learning activities and on-going support.

ATI helps in the design and implementation of the e-learning based tutorials, web courses, TEL consultancies and other training activities.

A4. Joint workshops and reporting.

ATI will organise joint workshops, seminars and conferences for presenting the achieved results and provide a consolidated report for the joint activities.

Below we provide several concrete examples of application of such cooperation scheme.

At the end of 2004 ATI started to identify the needs for TEL training and support of the INTEROP Network of Excellence [4]. INTEROP aims to create the conditions of an innovative and competitive research in the domain of Interoperability for Enterprise Applications and Software. INTEROP is an association of 50 partners from 15 countries coming from numerous sectors spanning academic institutions, research centres, industrial stakeholders and standards' communities. One of the main tasks of the INTEROP was to provide intensive training in the research areas developed.

We start with the definition of the Memorandum of Understanding between Kaleidoscope and INTEROP. After that we develop a working plan and started with the identifying of the real INTEROP needs. We identify that INTEROP project needs an advice (consultancy) in choosing the training platform and training scenario in order to realize this massive training. But they also needed training about what methodology to use for the preparation of the training materials, how to follow the e-learning standards, as well as how to use the training platform chosen. So far we provided the INTEROP project with the needed consultancy and started to identify the most suitable training offer from Kaleidoscope, satisfying INTEROP needs. The training is planned to start in the beginning of October 2005.

Other example is the cooperation with the supported by the European Commission with the SOCRATES/ERASMUS Programmes ETN-DEC [5]. ETN-DEC aims to establish the principles of effective, high quality, Europe-valid doctoral studies and develop the tools for doing this through analyzing the existing systems, exchanging experiences and disseminating good practices among all partners. ETN-DEC is an association of 73 partners from 30 countries from academic institutions and research centres. One of the main tasks of this project is to help acknowledge doctoral studies as an important "third" cycle of education aiming at the achievement of a European Dimension in Higher Computing Education and Training, using the most up-to-date information and communication technologies, and the experience gained from the VIRTUAL EUROPEAN DEPARTMENT of COMPUTING (VEDoC).

At the beginning of 2005 was initiated the main collaboration activities between Kaleidoscope and ETN-DEC and was developed a working plan. After that we started with the identifying of the real ETN-DEC needs of training, consultancy and TEL services.

Another interesting example is cooperation with the project PARCEL [6]. In that case PARCEL needs innovative TEL tools, which to be used for



real testing with users from non-profit organizations working in TEL area in Austria and Czech Republic. In order to provide such tools, available in Kaleidoscope Network of Excellence, ATI organized the call for tools, using the ATI Web portal features. We collect from Kaleidoscope researchers and developers a list of innovative tools which they are interested to provide for testing by PARCEL users. After the series of pilot experiments the PARCEL users will provide a feedback to the Kaleidoscope researchers and developers of the usefulness and usability of the provided tools. This example show how users' and society interests could be matched with the TEL research and development in Kaleidoscope NoE.

## **5. Conclusion**

ATI Kaleidoscope JPA aims to establish a flexible and sustainable training system for providing researchers and practitioners in e-Learning with knowledge and skills at European and world level of excellence. This will be achieved by developing an interactive human supported Web service oriented to providing highly specialized tailor-made training courses based on topics that the Kaleidoscope NoE member organisations demonstrate excellence in, or on topics that have been especially developed during the Kaleidoscope project life-cycle. Thus the e-Learning researchers and practitioners would get access to some advanced e-Learning research outcomes and ideas.

The ATI technology framework will include a set of capabilities such as mediator, distributor and full set of the necessary tools and utilities for all types of advanced training activities.

Many of the advanced training activities are highly specialised and advanced for training mid-career or senior researchers. They develop and sharpen researchers' skills in conducting efficient research in TEL that responds to the up-to-date research achievements. Because ATI opens a global perspective, the researchers who attend courses benefit from the mass of information and data assembled and handled in a global research programme. Course leaders (many of them internationally recognised scientists) work with course participants on new applications of cutting-edge research methods and technologies. Thus ATI creates an international community of knowledge in TEL. Course participants and course leaders form a community of best practices for research and development, that would continue to function (hopefully) long after the course work ends. Alumni of ATI courses (researchers and practitioners) would become a significant force for educational change in their institutions and countries.

## **6. References**

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