Through the lens
For Leonardo da Vinci, learning came from looking. Direct observation of phenomena in nature was accompanied by careful description and reflection, in words and pictures. What we learn from Leonardo, then, is from and about his representations, whether rendered in brown ink on paper or on full-color canvases.

Five hundred years later, most everything we learn is mediated by some tool or technology. Nature is most often observed through a screen of some sort. That was the theme taken up by Bruno Bachimont and fellow philosophers at the first symposium on the philosophy of technology-enhanced learning. Today, “we inhabit not nature,” said Jan Derry, “but second nature.”

Leonardo’s style of learning was limited. The lens of science and technology, writes Achilles Kameas in this month’s Viewpoint, allows us to study abstract concepts, to see the invisible, to make connections.

Now ubiquitous computing and ambient intelligence, he explains, promise to get us away from the screen and back out into the field - this time with our technology in tow. When information and communication is everywhere, so is instruction, construction and collaboration. Yes, soon nature too will be networked.

With a turn of the kaleidoscope, the vision of ambient intelligence overlaps with that of the Learning GRID. Learning resources are distributed across devices both fixed and mobile, for seamless access anywhere, anytime. This month the GRID goes mobile, providing scenarios for learning on the go. Isolation dissolves, content is framed by context.

“While the focus on the learner was the mark of the past decade, the focus on the situation is likely to be the mark of the coming decade; being pushed to the fore by the development of mobile technology and of research on ambient informatics.” Nicolas Balacheff comes into view, addressing the eLearning Conference in Brussels, stressing the importance of basic research, and continuity of research, in our rush into the technologically-mediated future.

And so our gaze turns, naturally, to our children, and grandchildren. How will they see, share, depict and reflect? People like Tony Hall are addressing them directly, shaping the new technologies into
environments for exploration. Digital data is escaping the screen and inhabiting the physical. It's almost as if Leonardo's sight and spirit was embedded in the very objects he observed.

And when everything is networked, our very notion of what a mind is, what cognition is, what a person is, may extend across the entire globe. Kaleidoscope aspires to be the hub of such a network, informing the concepts and methods as well as the technologies that mediate our learning. Now what would Leonardo have seen if he'd had such a powerful lens?

Kevin Walker, Editor

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**News from the GRID**

Do the words "distributed learning" pass right between your ears, or maybe get into your head but soon dissolve in swirling confusion? The Kaleidoscope Learning GRID special interest group is here to help. The latest issue of the group's newsletter contains six helpful scenarios describing just what a grid for learning is, and why it is important in our increasingly networked world. The scenarios in this issue focus on mobile technologies, and describe how average people would learn when learning resources are embedded in a seamless, invisible grid that surrounds us, wherever we go.

An important emerging standard in e-learning is IMS Learning Design, a language for describing learning processes in terms of scenarios, with learners playing roles in certain activities. But the specification has some limitations in creating truly personalized learning - particularly when services, users, and contents are decentralized. In another article in the GRID newsletter, Francesco Orciuoli describes how IMS-LD can be extended for distributed environments. (You can find out more about the IMS Learning Design specification at the UNFOLD workshop described below.)

Another article in the newsletter describes AstroGRID - a specific application of GRID technology to an area in which a lot of data is used by a lot of researchers located all around the world - all focused, of course, on other worlds. The newsletter also contains the latest relevant news, technologies, and events. Find the newsletter here, and get into the grid.
Computer Supported Inquiry Learning workshop  
18-20 May 2005, Genoa

Kaleidoscope Special Interest Group Computer Supported Inquiry Learning hosted a workshop at the Istituto per le Tecnologie Didattiche (CNR).

A complete report from the workshop will be available in this newsletter soon. In the meantime, a complete programme, with abstracts and other details, is available here.

eLearning Conference: Toward a learning society  
19-20 May, Brussels

Kaleidoscope scientific coordinator Nicolas Balacheff delivered an address at the eLearning Conference, titled For A Renewed Academy Industry Research Partnership. Here is a summary:

"The joint venture between the academic research on learning technology and industry along the past decade shares similarity with the gold rush: great effort for a too small outcome. From all the energy spent, 'acadustry' has emerged; a chimerical community of practice, merging academic and industry objectives and traditions. The relevance and fruitfulness of this new community is questionable. This presentation will suggest revisiting the orientation of the eLearning research policy, taking into account the differences in nature between academic research, R&D and actual production and use. Among the priorities of policies to discuss, the following will be mentioned: (i) an incentive to reach a research consensus that complements the standardization effort; (ii) a strategic alliance between industry and research at a basic level for a common and enhanced understanding of differences and commonalities; (iii) a new balance between long lasting support to research, especially for pan-European initiatives in the context of ERA and in line with the current FP6 Networks of Excellence, and competitive calls focussing on specific actions. At a thematic level, this presentation will outline the lessons learned throughout the past decade and express a view on research priorities from a foundational and applied perspective."

You can read the entire text of the talk, here.

Kaleidoscope had an exhibition stand, alongside other e-learning networks and projects, with information about the our activities and events. It was well situated and well attended, and the conference and exhibition were generally very successful.
The Mediated Mind - Rethinking Representation
27-28 May, London

Do educational technologies demand a re-thinking of representation? The emergence of the Internet and other new technologies prioritises a range of important questions, including issues of generic images, abstract reason, representations as tools, epistemic action, mediation and pictorial communication. Such philosophical questions are germane to our understanding of education and learning in the new millennium, and create an agenda for philosophy which the first Kaleidoscope Philosophy of Technology-Enhanced Learning Special Interest Group Symposium aimed to facilitate.

The Symposium, held at the London Knowledge Lab, was truly international - not just in terms of the participants, but in theoretical foundations. Speakers and readings referred to French literary critics, Austro-Hungarian philosophers, American psychologists, and contemporary British educationalists.

In his keynote speech, Kristóf Nyíri of the Institute for Philosophical Research of the Hungarian Academy of Sciences talked about "the networked mind," starting from the networked brain, to networked individuals, and networked ideas. In all cases, networked knowledge is clustered, and an efficient network has hubs as well as nodes. The notion that ideas can be stored, accessed and shared outside of our heads - whether in other people's heads or in an object or technology - is a powerful one, and a central foundation in technology-enhanced learning.

John Preston of the University of Reading (UK) picked up this theme in referring to an extended mind, specifically with regard to mobile technologies. Mental phenomena, he said, can literally reside in the external environment - for example, an address written in a diary. Thus our notion of what a person is must include non-biological objects. And computational objects can not only hold memories but perform cognitive operations for us.

Mike Sharples of the University of Birmingham (UK) remained focused on mobile technologies - his own area of expertise - but sought more broadly to develop a theory of mobile learning. All learning, he said, is mediated by technology, echoing John Dewey's sentiment from a century ago that knowledge itself can be considered a type of technology, and all communication is educative. Adding elements of Engeström's expansive activity theory, he said that language is also considered a tool. Another important consideration with regard to mobile technologies is context. In the recently concluded Mobilelearn project, an interactional model of context was used - context changes not just with place and time, but with different interactions. During the discussion, it was noted that mobile technologies enable a sedentary type of mobility - with a wireless phone, for example, we don't have to get up to answer it.

Bruno Bachimont of the Université de Technologie de Compiègne referred to intellectual technologies and charted our evolution from graphical rationality - in which writing makes the temporal (oral) visual, and an emerging computational rationality, with representations in multiple media which are programmable, layered, and networked. Everything we learn now is not merely from
observation, but is mediated by tools and technologies - there is, essentially, no meaning that stands apart from them. But like fish looking through water in the ocean, we often don't see what mediates our perception.

In considering networked knowledge, Jan Derry of the London Knowledge Lab began her talk with the notion of perception. She distinguished between information and knowledge, machine and human - machines, no matter how intelligent, merely take in information, whereas only humans can create knowledge and understanding. This, she said, is the difference between reception, perception, and conception - evoking J.J. Gibson's notion of affordances.

Other short talks were given. Russell Beale of Birmingham spoke on Representing the Future, and Don Peterson of the London Knowledge Lab discussed The Filtering Problem. Conference attendees broke into small groups for thematic discussions about issues raised in the presentations, and to map the territory of representation and mediation. Csaba Pleh of Budapest University of Technology and Economics (currently visiting professor at Indiana University in the USA) brought the issue back to the individual mind with his keynote speech on the second day, a review of alternative conceptions of representation in contemporary cognitive science.

The networked mind is mediated - by internal or external representations of things, information, knowledge; by tools and technologies; or by other people. Jan Derry summed up the conference theme by invoking the philosopher John McDowell: "We inhabit not nature but second nature."

Further information about the Symposium is available here. Streaming video of all of the talks will be available soon.

See also this report of the recent conference in Budapest, "Seeing, Understanding and Learning in the Mobile Age."

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**VIEWPOINT**

**Ambient intelligence, ubiquitous applications, ___ learner**

_Achilles D. Kameas_

"While getting old, I am still learning."

A wise man said this a long time ago, when there was no Ambient Intelligence nor any ubiquitous computing applications (to be precise and modest, we have to accept that Natural Ambient Intelligence (NAml) has been around us for ever; it is Artificial Ambient Intelligence (AAmI) that we aim for - usually by copying the solutions reached by NAml systems). So people have always been learning, only that by studying nature they could mostly learn concrete, usually isolated pieces of knowledge. Science and technology have been employed in order to teach higher-level, abstract concepts and ways to create new concepts and tools to study them. So, during the old days, it was natural for people to be learning by doing, that is, by simply trying to solve their everyday problems in a practical manner. For quite some time it was infeasible to have students use natural or experimental settings in order to learn. Information and computer technology (ICT) promised to change all that, but has only partially succeeded. A reason given for this is that people create artificial learning applications using ICT, which support only low bandwidth interaction, have unnatural interfaces, and can only be accessed through a computer screen. In a nutshell, we have been creating educational applications, not learning environments, where students had to interact instead of simply acting. That is, until now.
Ubiquitous computing promises to change the affordances of ICT applications by removing the interface. Computing ability dissolves into the environment; communication capacity is inherent and always available; data storage is abundant and access is location-transparent; networks are fast and reliable; devices become smaller and more powerful everyday; the environment is full of data sources and displays. Applications can now be considered as environments; ultimately, they shall disappear into the environment. They can be composed of software components executing on the small computers that have been embedded into the physical objects in the physical or digital environment of the learner. And it can get better: applications transcend the borders of physical settings, as in principle they can be deployed seamlessly over a multitude of changing environments. And the most important is that people are placed in the center: the (A)AmI vision is a people-centered one (while I’d call NAmI vision a survival oriented one).

It is widely acknowledged that learning can greatly benefit from AmI technology. The ISTAG report (available [here](http://www.noe-kaleidoscope.org/pub/news/printable.html)) includes a scenario (Annette and Solomon) describing a non-typical learning situation. In the meantime, several research efforts have been creating AmI supported learning environments for all grades of education, starting from elementary schools up to universities. Then we should be expecting most classrooms to turn into eClasses supported by AmI technology in the next five to ten years. Moreover, learners will be freed from time and space constraints and will be able to study proactively, collaborate and learn naturally in their own pace. And since learning interactions will become natural activities, the learning population will increase to include all people who have access to learning resources (ideally, the ability to use computers will not be a prerequisite).

Well, this is a possible future, but in order to get there, I think we need to change our way of thinking.

Nowadays ICT is all around eClasses and much too visible to ignore; learners use handheld devices to access eLearning applications, not environments. Because of having to interact with such devices, students most of the times need to learn to use two or more different interfaces. Interaction becomes complicated and sometimes people feel insecure, as they cannot perceive directly the outcome of their actions, nor have any control on the ways learning data can be used. In addition, tons of data and information can be available, usually in uncontrolled ways. In my view, the learners of tomorrow will be equally puzzled as the learners of today, but for different reasons: the source of puzzlement shall not be ICT, but its absence; the absence of physical point of reference for the various activities that will be happening around them (remember, they shall be placed at the centre). How can we stop such a person from running like hell towards the exit of the AmI-supported learning cycle?

First of all, I think we need to differentiate between the activity of learning and that of working, although both may at times happen concurrently and at the same place. Most eLearning applications of today that pursue the AmI vision look like eOffices: they create learning environments where people can exchange data (be it lectures notes, slides, comments, schedule etc) and hold video-conferences. But learning should be fun, not labor. And the setting should be as natural as possible. Then we must move our learning activity as much as possible into the natural environment that it refers to, by turning the environment into an AmI space instead of simulating the environment in our desktop: go to the park to study trees and squirrels instead of looking at a video showing squirrels that climb trees; then use AmI technology to keep notes or transfer images and sounds. If this is not possible, we should try and replicate learning environments not in our desktop, but in the space we use for learning: exploit the affordances of objects to temporarily adapt their functionality to the requirements of the learning scenario; thus a window looking at the street can
become a window looking at a volcano about to erupt, with environmental conditions of heat and noise simulated with the air-conditioning and the loudspeakers in the room. Ultimately, we should be looking for learning as an emerging property of the symbiosis under controlled conditions of a community of AmI objects and people.

These points illustrate what I think to be three of the most important features of ubiquitous learning environments that can be made possible with AmI technology: natural interaction (thus, simply action), situated learning (thus adaptable to context, which includes the self and the others), and controllable transparency (using living space-based metaphors instead of desktop). To achieve the above, apart from network infrastructure, software services, nanotechnology breakthrough, and so on, we also need ways to create and manage meaningful knowledge from a huge amount of data, a large part of which is being continuously created by sources beyond control. We need descriptions of task and goals, ways to fuse sensor data streams, location data, meta-data about settings and context, in addition to the (more traditional) content descriptions and rules and models of learning and correcting mistakes. And most importantly: we need ways to integrate, process, and in general manage this exploding knowledge in ways efficiently and proactively adapting to the changing needs of the learner. Some say - and I tend to agree - that we have to employ intelligent agents in teaching, who will be continuously learning as they get old.

And that's only as much as technology is concerned. So after reading this, how would you fill the space in the title?

**Achilles Kameas** is Assistant Professor at the [Hellenic Open University](http://www.noe-kaleidoscope.org/pub/news/printable.html) and Head of DAISy group at [Computer Technology Institute](http://www.noe-kaleidoscope.org/pub/news/printable.html), Hellas, Greece. This month he will be involved in the [IEE International Workshop on Intelligent Environments](http://www.noe-kaleidoscope.org/pub/news/printable.html).

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**ANNOUNCEMENTS**

Call for Papers

**Int'l Workshop on Combining Intelligent and Adaptive Hypermedia Methods/Techniques in Web-Based Education Systems**

*6-9 September, Salzburg, Austria*

There have been a great number of research efforts in designing and implementing web-based education systems that offer personalized learning or other personalized educational facilities to users. Personalization concerns a number of educational activities/facilities, like lesson planning, teaching content specification, answer/solution analysis, problem solving support, student evaluation, test generation, student collaboration, class monitoring, educational resources recommendation, etc. Personalization is achieved by using methods/techniques coming from two main sources: Artificial
Intelligence (AI) and Adaptive Hypermedia (AH). AI methods/techniques include: knowledge representation and reasoning, expert systems, AI planning, machine learning, neurocomputing, etc. AH methods/techniques include: adaptive text presentation, adaptive link annotation, adaptive link sorting, etc. AH methods/techniques may use AI methods/techniques for their implementation. However, most of the existing Adaptive Education Hypermedia Systems use methods/techniques that can hardly be considered as "Intelligent". On the other hand, Intelligent Tutoring Systems are education systems that really use intelligent methods/techniques for implementing tutoring tasks. Also, apart from "traditional" AI methods/techniques, there have been Web-oriented AI methods/techniques, like web usage mining or filtering techniques. Furthermore, Semantic Web is a source of additional intelligent methods/techniques, like ontologies based representation, description logics based reasoning etc. So, web-based intelligent/adaptive education systems that combine an AI method/technique either with another AI method/technique or with an AH method/technique seem to be an interesting research direction.

The objective of the workshop is to bring together researchers and developers of web-based intelligent and adaptive education systems to exchange experiences and ideas on how intelligent methods/techniques can be combined either with themselves or with adaptive hypermedia methods/techniques towards more effective personalized education.

Topics of interest include (but not limited to) the following

AI in authoring and visualizing adaptive educational hypermedia
AI in collaborative web-based educational systems
AI planning techniques for web-based curriculum sequencing
AI techniques for adaptive presentation and navigation
AI techniques for pedagogical strategies implementation
Cognitive models in adaptive hypermedia educational systems
Data mining in adaptive education hypermedia systems
Description logics in semantic web-based education systems
Expert systems in adaptive education hypermedia systems
Hybrid AI techniques in web-based education systems
Intelligent agent based adaptive educational hypermedia systems
Knowledge representation techniques for web-based student modeling
Logic based representations in web-based adaptive education systems
Machine learning for web-based student modeling
AI in automatic generation of educational hypermedia resources
Neurocomputing in adaptive education hypermedia systems
Ontologies for semantic web-based tutoring tasks
Recommender systems in/for web-based education
Web usage mining for web-based education

Paper submission and processing
We are interested in high quality research papers on the above or related topics. Interested authors should submit electronic versions of their papers (in pdf, ps or word format) to the Workshop chair (see at the end of the page). The papers should not exceed 10 pages (following standard ACM guidelines) and are due by June 12th, 2005. All papers will be refereed by at least two members of the program committee of the Workshop.

Important dates
Paper submission due: June 12th, 2005
Notification of acceptance: July 22nd, 2005
Final version due: August 5th, 2005

Proceedings
Proceedings of all accepted papers will be published in the ACM Digital Library. Selected authors may be asked to submit extended versions of their papers to be considered (after a second review round) for publication in a special issue of an international journal.
Workshop Attendance
One of the authors of each accepted paper is expected to present it at
the Workshop. Workshop participants are limited to 20-30 persons.

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Call for papers

Advances of Semantic Web for E-learning

Kaleidoscope is sponsoring a special issue on Advances of Semantic
Web for E-learning: Expanding learning frontiers

British Journal of Educational Technology
Edited by: Nick Rushby, Print ISSN: 0007-1013, Online ISSN: 1467-8535

Special Issue Editors
Ambjorn Naeve, Head of the Knowledge Management Research group,
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**Wolfgang Nejdl**, Director of the L3S Research Center, University of Hannover, Germany, and Coordinator of the PROLEARN network of excellence within technology enhanced learning; **Nicolas Balacheff**, Director of the Leibniz laboratory (CNRS-INPG-UJF), Grenoble, France, and Coordinator of the KALEIDOSCOPE network of excellence within technology enhanced learning; and **Joseph Harding**, Director of the Collaborative Technologies Laboratory in the Duderstadt Center, University of Michigan, USA, and Project Chair of the SAKAI project

**Focus**
The advent of Semantic Web and its relevant technologies, tools and applications provide a new context for exploitation. The “expression of meaning” relates directly to numerous open issues in e-learning. In this special issue the focus is two-fold: On the one hand to stress the importance of applying Semantic Web techniques towards constructing systems that provide value to learners, and on the other hand - to reveal research opportunities that can initiate interesting projects over the forthcoming years.

In the W3C Semantic Web activity a list of priorities has set the challenging landscape for the realization of the next generation web: The creation of a Policy Aware Infrastructure, the Ontological Evolution, the promotion of a Web of Trust, and the facilitation of Information Flow and Collaborative Life.

The huge work that has been carried out during the last years in the context of Semantic Web by several official bodies and research groups has lead the research community to a mature level concerning strategies, technologies, frameworks and implementations. According to Eric Miller, head of the W3C SW activity “The WWW2004 Web conference had a huge Semantic Web focus and reminded me of the second web conference in Chicago. Chicago, it seems to me, was a turning point as everyone who attended realized the Web was not a fad, but rather something that was going to revolutionize how we communicate. The WWW2004 conference had a similar impact on me with regards to the Semantic Web. The technologies and toolkits are maturing. Semantic Web applications are becoming far more prevalent”

Similarly, Amit Sheth stresses that “Semantic Web technology is here to stay” but the most critical aspect is to focus on Semantics rather than on Web, since “If SW is narrowly defined, ruling out anything that does not involve formal representation and inferencing, then it may not be in vogue for too long”.

In this context this Special issue of the BJET Journal intends to be a reference point for all researchers interested in the challenges that Semantic Web poses to E-learning in particular and to Learning and Knowledge Technologies in general.

The ultimate objective is obvious. Semantic Web Research “targets the improvement of the human experience and the enrichment of the living, through a major shift of focus - from computing to improving human experience - not only with better ability to use heterogeneous content and apply knowledge, but also to incorporate perception and pervasive computing” (Sheth 2004). The exploitation of Semantic Web in the context of e-learning requires a deeper understanding of the relevant issues. In figure 1 we have tried to summarize some key research themes in the convergence of Semantic Web and E-learning. More specifically we have used a matching of key issues that have significant roles in Semantic Web and E-learning Research respectively, and we have developed a set of research priorities.

Three cyclical areas summarize the current research in semantic e-learning. We use for their discussion a pair where the first part relates to the Semantic Web key issue and the second one to the E-learning Key Issue:

Expression of Meaning - Content authoring:
The obvious direct relation of Semantic Web and E-learning combines the traditional content authoring process with the critical objective of expression of meaning. Issues like semantic mark-up, semantic retrieval, personalized, (semi)-structured annotation and content conversion are leading a big research stream, in which the main concern is the development of semantic e-learning content.

Ontological Evolution - Adaptive Hypermedia:
The traditional Adaptive Hypermedia considerations in E-learning are combined with Ontological engineering and a lot of flexible systems and accompanied methodologies have emerged. Issues like ontology-building, ontology-integration, conceptual modelling and semantic conceptualisation reveal a new research agenda, in which the specifications of conceptualisations (ontologies) promote the performance of learning systems.

Information flow and collaborative Life / Learning Context:
As mentioned above, the instrumenting of knowledge flows has been set as one of the priorities of the SW W3C activity. According to Eric Miller “One of the challenges we will meet is to strike a balance between requiring authors to do more at the outset to make information machine processable, insisting that everything the machine could use to answer a question be recognized and identified by the (human) questioner, and leaving large quantities of information inaccessible to the machine”. In this area Semantic Services, (Semi) Automated Reasoning and Argumentation are critical themes on the semantic e-learning agenda.

Policy Aware Infrastructure - Interoperability/Standards:
The E-learning industry has many achievements in the area of interoperability and standards and from this perspective it recognizes the need to secure a policy-aware infrastructure. The Semantic Web will only achieve its potential as an information space for the free flow of scientific and cultural information if its infrastructure supports a full range of fine-grained policy controls over its content. The research on types of control over content, the compliance to semantic and metadata models as well as the issues of versioning and provenance require extensive research.

Web of Trust - Communities/Social Dimensions:
According to Eric Miller “Trust in the human social context is based on constantly evolving and adapting information.” Two parties may trust each other based on a history of mutual interaction, based on formal contracts that in turn rely on other established systems (e.g. legal and legislative), and based on risk analysis of a failure of any party to perform as agreed. In the E-learning Industry this issue is of critical importance. The Learning Objects Marketplaces and Farms, the Unique Identifications of Resources and the Development of Intelligent Assistants will require a Semantic Web language of describing trust. A lot of work remains to be done within this area.

Intended Topics
Within the forthcoming years, Semantic Web will provide a challenging research context for the e-learning research community. The inevitable role of knowledge and learning in the knowledge society will drive the development of several semantic web-enabled services, tools, and applications for citizens and learners.

The e-learning research community has a critical role in creating synergies and providing value systems for learning by exploiting the Semantic Web capacity, building on the maturity of the previous research in e-learning: Research areas such as: standards and metadata, adaptive hypermedia, learning communities, knowledge management, personalized delivery of content, and learning content annotation show a significant level of readiness to exploit Semantic Web. A number of research issues in e-learning revealed during the past years can be approached through semantic web practices, tools, methods and technologies.
We invite submissions that fall in to the following three areas:

A. Preparation for Semantic E-learning / Semantic e-learning readiness
   In this area the main emphasis is placed on the conversion and the compliance of learning content to semantic web standards. In the current stage of Semantic Web evolution, this is basically pursued through the specification of ontologies and their use for e-learning. Typical themes in this area are:
   - Semantic Annotation of Learning content: Content/Learner/Context orientations.
   - Methodologies for (semi) automated conversion to Semantic content.
   - Semantic Mining according to multi-criteria for learning performance.
   - Development of Learner Model Ontologies.

B. Semantic E-learning
   The Realization of Semantic E-learning requires a multifold approach to a number of vertical and horizontal themes. The international collaboration can promote such a goal, and obviously the success of the previous area (Semantic E-learning Readiness) will influence the possibilities for successful and wide adoption of Semantic E-learning. Some interesting research themes in this area include:
   - Semantic E-learning Services: exploring resource identities for (semi)-automated value provision.
   - Semantic Content Repositories and Intelligent Assistants.

C. Next Generation E-learning
   Undoubtedly, Semantic Web is present on many milestones towards our goal for effective learning. In the next years we think that the key challenge for Semantic Web as well as for e-learning will be to develop infrastructures capable of exploring learning content in every format in an integrative way. This means that we will see a shift of focus from formalizing/codifying learning content to managing content in multimedia forms through automated reasoning and exploitation of mobile, wireless networks as well as new vehicles through digital TV channels.
   Some interesting research themes in this area include:
   - Semantic Multimedia Content Management: methodologies/ engineering.
   - Bridging Semantic E-learning to Ubiquitous and Pervasive Networks.

Important Dates
   Send manuscripts to Lytras@ceid.upatras.gr and cc: amb@nada.kth.se
   15th June 2005 Submission of manuscripts
   15th July 2005 Notification to authors
   30th September 2005 Final versions due
   Early 2006 Publication

Style and Author Guidelines
   Author guidelines are available here.

Special Issue Sponsors
   1) AIS SIG on Semantic Web and Information Systems,
   2) PROLEARN, ‘Network of Excellence for technology enhanced professional learning’,
   3) KALEIDOSCOPE, ‘European Network of Excellence in technology-enhanced learning’
   4) SAKAI Project, a community source software development effort to design, build and deploy a new Collaboration and Learning Environment (CLE) for higher education.
REFERENCES

Download a PDF version of this call (263K).

PARTNER SPOTLIGHT
 Campo Rosso
 Brussels

In this video, Rossella Magli explains the benefits that Kaleidoscope brings to her company - the smallest partner in Kaleidoscope (which is the largest research-oriented Network of Excellence). "I find it extremely challenging," she says, "not to be confined to a single discipline, because I think this field in particular is a result of the negotiation of many different fields of knowledge and of expertise, and can only be successful if this synthesis is constantly negotiated and renegotiated."

She also describes the strengths that Campo Rosso brings. "It's intentionally small," she says. "It doesn't want to grow, because it's a flexible structure to operate in different contexts and different realities - both in the world of university research and in the world of industry, and in the world also of policy decision makers - giving advice and developing research work for policy making purposes."

Rossella is part of the Kaleidoscope Executive Committee, and is involved in the Users Group.

COMING UP
Kaleidoscope at the Computer Supported Collaborative Learning conference
30 May-4 June, Taipei, Taiwan

Many Kaleidoscope members are participating in CSCL2005, and you can participate with them. The conference web site includes Ask the Author in which you can discuss papers with the author before, during and after the conference. The Kaleidoscope CSCL Special Interest Group has information on all the Kaleidoscope-related participation at the SIG web site, including names and abstracts. In addition to papers, Kaleidoscope members have organised workshops and interactive events. There is also a Ph.D. student consortium with Kaleidoscope members taking part; the Kaleidoscope CSCL SIG has provided travel grants for Ph.D. students going to the conference. Visit the Kaleidoscope CSCL SIG web site for complete information.
Interaction Design and Children
8-10 June, Boulder, Colorado, USA

Kaleidoscope member Tony Hall of the University of Limerick will present "Designing ubiquitous computing to enhance children's interaction in museums" at the fourth international Interaction Design and Children conference. He has just returned from EdTech2005, the sixth annual Irish Educational Technology Users Conference, where he presented similar work, and will present another paper in this area at the EARLI conference in August. Tony completed his Ph.D. last year and is now a research fellow at the University of Limerick. He is part of the Kaleidoscope project Mobile learning in informal science settings.

Semantic Web for Web-based Learning
13 June, Porto, Portugal

Several Kaleidoscope members are participating in the Second International Workshop on the Semantic Web for Web-based Learning, held in conjunction with the Conference on Advanced Information Systems Engineering (CAiSE), held 13-17 June. Weiqin Chen of the University of Bergen (Norway) will give an invited talk on "Semantic Annotation Tools for e-learning: specification and categorisation." Baruk Toledano, Monique Baron and Hélène Giroire of the Laboratoire d'Informatique de Paris 6 will present "OBGeXE: An Ontological Based Metadata Editor for Learning Objects." Michel Sala of the University of Montpellier II will present (with Gael Isoird) "Dynamic Creation of a Course basis from Existing and Distributed Learning Materials."

On the Programme Committee are the following Kaleidoscope members:

- Daniele Herin (University of Montpellier II, France - co-organizer);
- Jacqueline Bourdeau (LICEF, Canada);
- Weiqin Chen (University of Bergen, Norway);
- Michelle Joab and Michel Sala (University of Montpellier II, France);
- Agathe Merceron (ESILV, France);
- Carlos Cardoso Oliveira (Porto University, Portugal);
- Niels Pinkwart (University of Duisburg, Germany);
- Carsten Ullrich (Saarland University, Germany); and
- Peter Wood (University of London, UK).

Complete information is available on the workshop web site.
eContentPlus Information Day
15 June, Luxembourg

The eContentPlus is a European Community programme to make digital content in Europe more accessible, usable and exploitable. It will support the development of multi-lingual content for innovative online services across the EU, with a budget of 149 million euros to tackle organisational barriers and promote leading-edge technical solutions to improve accessibility and usability of digital material in a multilingual environment.

The programme addresses specific areas where development has been slow, including educational content, as well as geographic, cultural, scientific and scholarly content. In the area of educational content, the programme will support the emergence of an adequate information infrastructure, and encourage the use of open standards to stimulate the deployment of effective pan-European learning services. The programme also supports EU-wide co-ordination of collections in libraries, museums and archives and the preservation of digital collections so as to ensure availability of cultural, scholarly and scientific assets for future use.

On Wednesday 15 June an Information Day will be held in Luxembourg for the first call for proposals of eContentPlus. The day will be dedicated to a detailed presentation of the programme and the call for proposals. Subject to the completion of all the necessary procedures, it is intended to launch a call for proposals in June 2005 with a deadline for proposals in October 2005.

Further information and registration forms are available here. If you wish to attend the Information Day and/or receive further information about the eContentPlus programme, please register on the website.

CompSysTech 2005
16-17 June, Varna, Bulgaria

Kaleidoscope member Roumen Nikolov is one of the organisers of the International Conference on Computer Systems and Technologies, to be held at the Technical University in Varna. This year the conference includes a joint workshop between Kaleidoscope and the European Thematic Network for Doctoral Education in Computing. The network consists of 156 members from 73 partner institutions in more than 30 countries in Europe.

Complete details can be found here.

UNFOLD Communities of Practice meeting
15-17 June, Braga, Portugal

There will be an UNFOLD Communities of Practice meeting in Braga (near Oporto) Portugal, from June 15th - 17th. It is intended for people working with the IMS Learning Design specification, or considering doing so.

The meeting will build on earlier events by providing an introduction to Level C, and updates on emerging tools, including the CopperAuthor editor, the new version 2 of RELOAD with Level B and C support, and the DialogPlus Toolkit. However our principal focus will be on making progress with enabling teachers to work with the Units of Learning which are
produced with these tools.

The meeting will include presentations, and hands on sessions with tools, but plenty of time will be left for discussion. The overall structure of the meeting will move from a discussion at the level of pedagogy, moving onto what this implies for visualising and editing LD templates, and finally looking at what can be done in practical terms with the tools which we currently have available.

The presentations at the meeting will include:
- Rob Koper, Open University of the Netherlands
- Bill Olivier, JISC UK
- Martin Dougaimas, Moodle
- Ernie Ghiglione, LAMS
- Dominique Verpoorten, LabSET Université de Leuven, the BLEM model
- Karen Fili, DialogPlus Project
- Alex Little, Open University UK, SLED project
- CASLO Project, Carlos III University, Madrid
- Centre for Learning & Teaching Through Technology University of Waterloo, Canada
- CopperAuthor Learning Design Editor
- RELOAD Learning Design Editor (Levels B and C)

The meeting is free, but participants are expected to cover their own travel and accommodation costs. It is advantageous (but not essential) to bring a wireless enabled PC portable computer.

For more information please visit www.unfold-project.net and click on the “cop meeting portugal” tab at the top of the page. You can also mail me at unfold.info@upf.es.

We hope to see you in Portugal

Dai Griffiths, UNFOLD Project Coordinator

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EDEN 2005 Annual Conference
20-23 June, Helsinki

Kaleidoscope member Claudio Dondi of Scienter (Italy) is one of the keynote speakers, delivering “Distance Learning and eLearning in European Policy and Practice: the Vision and the Reality” - the ODL Liaison Committee Policy Paper. He will also participate in the Horizontal E-Learning Integrated Observation System (HELOS) Workshop, with the theme “Is E-Learning Contributing to Employability?”

Mario Barajas Frutos of the University of Barcelona will participate in the Network of Multigrade Education (NEMED) Workshop, with the theme “Lifelong E-Learning for Multigrade School Teachers.”

Monique Grandbastien and Michelle Joab of the University of Montpellier II will participate in a session on e-Quality: Training Teams to Implement Quality in ODL at University Level in Europe.

Get details about the conference here.
ED-MEDIA World Conference on Educational Multimedia, Hypermedia & Telecommunications  
27 June - 2 July, Montreal

Kaleidoscope member Elsebeth Korsgaard Sorensen of Aalborg University (Denmark) is on the Programme Committee of ED-MEDIA 2005, organized by the Association for the Advancement of Computing in Education. This annual conference serves as a multi-disciplinary forum for the discussion and exchange of information on the research, development, and applications on all topics related to multimedia, hypermedia and telecommunications/distance education.

Get complete information here.

Integrating Working and Learning  
28 June, Graz, Austria

Kaleidoscope member Tobias Ley is one of the organizers of IWL’05, a special track of the I-Know Conference.

Tobias and his colleagues seek to bring together a wide variety of views on the issues of workplace learning, and are inviting other researchers to submit their case studies, empirical results, and other research related in the areas of informal learning, collaborative learning, and workplace learning.

They have also established a community platform for discussion before and after the workshop with anyone interested in the topic. Their aim is to produce a compendium that reflects state of the art research and practice in the field. Complete details are available here.

Tobias is completing his Ph.D. thesis under Dietrich Albert (another Kaleidoscope member) of the University of Graz. “The topic is on deriving competencies in companies and thereby supporting professional development,” he says. “The basis is a theoretical framework that relates competencies and performance outcomes which I have applied in research and knowledge intensive settings.”

At the I-Know conference there is also a workshop organized by ProLearn, the network on technology-enhanced professional learning.

Ubiquitous Computing Paradigms and Scenarios  
28-29 June, Colchester, UK

The IEE International Workshop on Intelligent Environments will provide a leading edge forum for researchers and engineers from across the world to present their latest research and to discuss future directions in this area. The workshop aims to bring together researchers from both industry and academia from the various disciplines contributing to the area on Intelligent Environments which will help to
stimulate research and break down barriers between the different disciplines in both industry and academia.

Kaleidoscope member Achilles Kameas of CTI (Greece) has organised a Special Session on Ubiquitous Computing Paradigms and Scenarios. This session aims to provide a forum for presenting case studies of Ubiquitous Computing paradigms and scenarios. One of the papers presented is “Facilitating Learning in an Intelligent Environments” by Kaleidoscope members Niall Winters, Kevin Walker and George Roussos of the London Knowledge Lab.

Achilles will also present the paper “A Conceptual Model and the Supporting Middleware for Composing Ubiquitous Computing Applications,” co-authored with fellow Kaleidoscope member Nikos Drossos as well as C. Goumopoulos.

Complete details are here.

**IADIS Mobile Learning**

**28-30 June, Qawra, Malta**

Kaleidoscope members Russell Beale, Mauro Cherubini, Alain Derycke, Mona Laroussi, Patrick McAndrew, Sara Price, Eileen Scanlon, Josie Taylor and Mikael Wiberg are all on the Programme Committee for the IADIS Mobile Learning conference. This is co-located with the IADIS E-Society conference, and there is also a Summer School on Educational Technology in a Cultural Context Complete details can be found here.

**1st International Kaleidoscope Symposium on Technology-Enhanced Learning**

**6 to 8 July, 2005, Oberhausen, Germany**

Registration is now open, go to this page. The Symposium will feature:

- Supporting student-centered learning with cognitive tools, a talk by Prof. Susanne P. Lajoie of McGill Faculty of Education
- Showcase demonstrations of projects in the field
  - ‘The epistemological challenge of designing for digital learning,’ a talk by Prof. Richard Noss of the London Knowledge Lab
  - ‘Technological and Pedagogical Aspects of Integrating Learning Processes,’ a talk by Prof. Ulrich Hoppe of the University of Duisburg-Essen
  - The Role of Networks of Excellence and the Future of Kaleidoscope,’ a talk by Prof. Nicolas Balacheff of CNRS, Laboratoire Leibniz, Scientific Manager of Kaleidoscope
  - An International Panel
  - Doctoral student workshops
  - more workshops, presentations, posters, and a social event

**EuroLogo**

**27-31 August, Warsaw**

Kaleidoscope member Secundino Correia of CNOTINFOR (Portugal) is one of the Chairs of this conference, the theme of which is “digital tools for lifelong learning.” Logo was born around 40 years ago, and is now a mature programming language. The conference will focus on aspects of Logo that make it a useful tool for creative problem solving throughout life, for anyone. The creator of Logo, MIT Emeritus Professor Seymour Papert, will speak at the opening session. Complete information is available here.
Technology and change in educational practice
5-6 October, London

This conference, at the London Knowledge Lab, will explore the use of new technologies in Higher Education and their subsequent effect on roles and practices within education.

The rapid growth of computing, networks and infrastructure offers not only an increase in available technologies for learning but also a change in its potential use in education. The subsequent impact of such rapid and diverse technology development on various staff roles and practices within is likely to be extensive.

This conference will provide a forum in which research into these developments can be shared and debated. It will be distinctive in that it will be a small-scale event with adequate time to elaborate and explore the ideas presented. It builds upon work carried out under the Kaleidoscope Network of Excellence that is investigating trends in technology implementation in Higher Education and research that increases our understanding of subsequent changes in roles and practices of all those involved in Higher Education provision.

There is a Call for Papers open until 17 June. Download a PDF with complete information (82K).

Learning Technologies and Work Symposium
26-28 October, Liege, Belgium

This workshop is organised by the Kaleidoscope Learning Technologies and Work Special Interest Group, and will be organised in thematic sessions, across three main themes of "Presence and interaction", "Action, perception and tangibility" and "Characterisation of the knowledge required in technology-rich workplaces". It will include: presentations of research activities by participants and invited speakers; group discussions; a panel session including academic and industrial partners to focus on policy & practice issues in the workplace; poster presentations by Ph.D. students and junior researchers to accommodate for exchange of ideas/practices; and demonstration of system prototypes. This Call for Papers has a deadline of 11 July.

European Conference on eLearning
10-11 November, Amsterdam

Kaleidoscope members Mona Laroussi and Peter Zentel are on the Conference Committee of ECEL2005. "The ECEL conference joins together a multitude of international researchers and brazes a maximum of topics," says Laroussi (of the Institut National des Sciences Appliquées et de la Technologies, France). "I think that it would be interesting to submit a paper and to be
present in this conference in order to have the chance to meet researchers and to work for the good of the e-learning community.” The Call for Papers is open until 8 June, and complete information is available here.

Online Educa  
30 November - 2 December, Berlin

Kaleidoscope is one of the association partners of this year’s conference. Last year saw a record attendance of 1703 delegates from 66 countries. Online Educa is the largest gathering of e-learning and distance education professionals in Europe, enabling participants to develop multinational and cross-industry contacts and partnerships, as well as to enhance their knowledge, expertise, and abilities.

Other upcoming events

Every month this ePortfolio Workshops sponsored by European Institute for e-Learning, Champlost, France

1-2 June Collaboration in the e-workplace Paris
2-3 June World Summit Contributory Conference on ICT & Creativity Vienna
2-5 June Special Year in Art and Mathematics Boulder, Colorado, US
2-5 June IPSI Belgrade
3-5 June European Research & Innovation exhibition Paris
6-10 June Internet Global Congress Barcelona
7-10 June 3rd Intl Conference on Multimedia and ICTs in Education Cáceres, Spain
21-22 June UK eLearning Regions and Cities Conference Oxford
22-24 June 1st Intl Conference on e-Social Science Manchester, UK
6-9 September Combining Intelligent and Adaptive Hypermedia Methods/Techniques in Web-Based Education Systems Salzburg (deadline for participation 12 June)
15-18 January Multimedia Computing and Networking San Jose, California (deadline for participation 24 June)

This newsletter edited by Kevin Walker of the London Knowledge Lab. Contact him for further information.