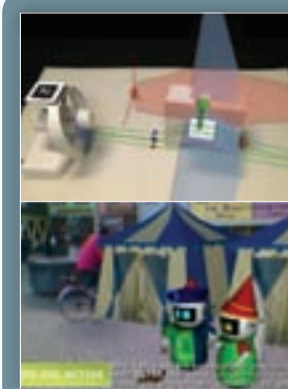


PARALLEL EVENTS - ACTIVITIES

Scientix workshop: The community for science education in Europe OpenID, Resources and Moodle (July 7th, 11:00 - 13:00)

During the Scientix workshop, participants will get an overview of the Scientix platform (<http://www.scientix.eu>) which includes projects, resources (both reports and teaching materials), fora, events and news. Participants will then be introduced to and will discuss OpenID, Intellectual Property Rights and Creative Commons licensing, with educational resources and Content Management systems like Moodle as examples. Alongside the short presentations, participants will get hands-on experience in the different tools and will be able to discuss their advantages and disadvantages



Learning in Mixed Realities Current Work at Fraunhofer FIT, Hagen Buchholz (July 8th, 11:30-12:30)

Due to more powerful and feature rich new devices, in the recent years, Augmented Reality (AR) technology has shifted from the research towards the mass market. Mixed Reality technology now might have the potential to reveal new ways of learning, addressing communities rather than only a hand full of exclusive test users.

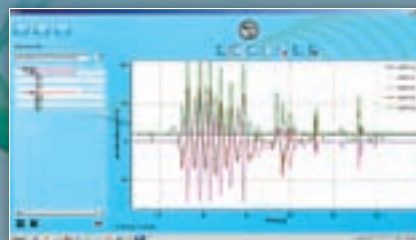
Dipl.-Ing. Hagen Buchholtz from Fraunhofer Institute of Technology will present some of their recent work in the field of learning in Augmented and Mixed Reality including products such as Layar, or Wikitude that are only the beginning of a whole new set of applications which superimpose the users current view with additional digital information. Moreover, summer school participants will be given the opportunity to experience AR hands-on through their dynamic interaction with five miniature exhibits developed by the Science Center To Go (SCeTGo) project (<http://www.sctg.eu>). SCeTGo brings into a school's classroom via miniature exhibits a comprehensive learning experience not only by enriching the teachers' and students' optical view with relevant information but also by allowing them to actively manipulating intriguing experimental mini setups and teach/learn by doing.

DEMONSTRATIONS OF INNOVATIVE TOOLS

Kicking Life into Classroom <http://www.ea.gr/ep/klic>

Kicking Life into Classroom (KLIC) aspires to teach science with the use of wireless embedded sensors by transforming the classroom to an experimental laboratory for all. The students transform their sport activities into scientific experiments and through the collection, manipulation and analysis of their own data they learn science. During the summer school the KLIC sensor data collection system will be available to all participants in order to:

- test KLIC's various modules (ball with embedded accelerometer, leg & arm accelerometers and a vest equipped with various sensors, designed to carry components that measure and transmit physiological data)
- collect personal data and through the use of the KLIC interface software process the data and perform actions such as plotting data on a graph or creating a mathematical model to fit the data.



Learning with ATLAS@CERN educational approach <http://www.learningwithatlas-portal.eu>

The portal for Learning with ATLAS@CERN is an experimental laboratory for students and teachers. Its aim is to improve science instruction by expanding the resources for teaching and learning in schools and universities, providing more challenging and authentic learning experiences. Participants will be introduced to the portal and to HYPATIA, an event analysis tool therein for data collected by the ATLAS experiment that allows high school and university students to visualize the complexity of the hadron - hadron interactions and study different aspects of the fundamental building blocks of nature through graphical representations.



Developing Programming Skills by means of modern Educational Programming Languages

Summer School Programme

July 3rd - 8th, 2011

Heraklion, Crete, Greece

http://pskills.ced.tuc.gr/Summer_School



Lifelong Learning Programme



The summer school is organized in the framework of the COMENIUS In-Service Training Programme, and is supported by the PSkills project which is co-financed by the European Commission, Lifelong Learning Programme.

Organized by the Electronic and Computer Engineering Department of the Technical University of Crete, the Physics Department of the University of Crete and Ellinogermaniki Agogi



PROGRAMME

PARALLEL EVENTS - ACTIVITIES

	Sunday 3 July 2011	Monday 4 July 2011	Tuesday 5 July 2011	Wednesday 6 July 2011	Thursday 7 July 2011	Friday 8 July 2011
09:00-11:00		Introductory Session (Phaedra) Introduction to Scratch and MOLE N. Moutoutzis <i>Technical University of Crete</i>	Workshop 2 (Phaedra) Developing effective learning scenarios exploiting Scratch (Training) Dr. D. Smith <i>BMUKK</i>	Visit to Natural History Museum of Crete	Workshop 4 (Phaedra) Lego Mindstorms I. Somalakis <i>Knowledge Research</i>	Participants' Presentations (Phaedra)
			11:00 - 13:00 Plenary Session (Minos East) Observation of the Sun's chromosphere		11:00 - 13:00 Plenary Session (Pasiphae East / West) Scientix workshop: The community for science education in Europe-Open ID, Resources and Moodle Dr. A. Gras-Velazquez & M. Le Boniec <i>European Schoolnet</i>	11:30 - 13:00 Plenary Session (Minos East) Learning in Mixed Realities - Current work at Fraunhofer FIT Dr. H. Buchholz <i>Fraunhofer FIT</i>
17:00-19:00	Registration Opening Session (Minos East) Chair Prof. G. Neofotistos <i>University of Crete</i> Discover the COSMOS through the Skinakas Observatory Prof. I. Papamastorakis <i>University of Crete and FORTH</i> Computational Thinking as Inquiry: Technology in the Service of Science Dr. R. M. Panoff <i>Shodor and the National Computational Science Institute</i> Inspiring Science Education Dr. S. Sotiriou <i>Ellinogermaniki Agogi</i>	Workshop 1 (Phaedra) Working with Scratch (Training) N. Moutoutzis <i>Technical University of Crete</i>	Assembly of Galileoscope V. Tsamis & K. Tigani <i>Ellinogermaniki Agogi</i>		Workshop 3 (Phaedra) Lego Mindstorms I. Somalakis <i>Knowledge Research</i>	11:30 - 13:00 Plenary Session (Minos East) The Pathway to high quality Science Education Prof. F. Bogner <i>University of Bayreuth</i>
			Lectures * (Minos East) Educational resources for astronomy education Dr. R. Doran <i>NUCLIO</i>	Workshop 5* (Phaedra) Building automations and simple robotic project with Scratch G. Papadopoulos <i>Ellinogermaniki Agogi</i>		The Future of Scratch and block-oriented programming N. Moutoutzis <i>Technical University of Crete</i>

* 16:00 - 17:30

Observation of the Sun's chromosphere & Assembly of Galileoscope (July 5th, 11:00-13:00)

The summer school participants will have the unique opportunity to observe the chromosphere using a Coronado PST Ha telescope. When observing the chromosphere, one can witness the true nature of the Sun, a star boiling with violent, ever-changing activity. The participants will observe the sudden eruptions in the Solar atmosphere called flares and dramatic streamers known as prominences that shoot out from the Sun's edge. The Solar disk will look mottled with granularity and dark, snaking filaments. Active regions containing migrating sunspots and bright, irregularly shaped plages add to the incredible detail. During the noon plenary session, participants will have the chance to work in groups and assemble Galileoscopes which they will later use, during their visit at Skinakas Observatory. At the Skinakas Observatory participants will have the chance to observe Saturn with its famous rings, countless stars that are invisible to the naked eye and bright stars like Vega and Arcturus.



Visit to the Skinakas Observatory (July 5th)



The Skinakas Observatory is located on mountain Ida in central Crete at an altitude of 1750m, 45km by road from the Candia Maris Hotel. Before arriving at the observatory, we will make a stop for dinner at the traditional village of Anogia which is well known for its significant role in recent Cretan history. Participants will have the opportunity to learn about the Skinakas telescope and use it in order to make observations. Besides scientific research, Skinakas is also used for education in astronomy and is the main observatory of the DISCOVERY SPACE Network (www.discoveryspace.net).

Programme:

18:00	Departure from Candia Maris Hotel
20:00 - 22:00	Arrival at Anogia village - Dinner
22:30 - 00:30	Arrival at Skinakas Observatory
	Presentation of the Observatory by Prof. Ioannis Papamastorakis - Observations
00:30 - 02:00	Departure from Skinakas Observatory - Arrival at Candia Maris Hotel

Tales of Things: How to create an on-line museum / Visit to the Natural History Museum of Crete (July 6th)

During the visit to the National Museum of Crete (<http://www.nhmc.uoc.gr/en>) a do-it-yourself method for interacting with museums' collections and on-line exhibit catalogues will be presented. Participants will go on a field trip related to the natural habitat of Crete. During this field trip they will be involved in playful learning activities and experience the linking between real museum exhibits and virtual online information. The use of smart phones will implement the activity giving the opportunity to participants to retrieve information and interactive quiz games that are related to the exhibits. Participants will also have the opportunity to add social tags in order to characterise digital educational content related to museum exhibits and to present their own thoughts and ideas. The specific activity is organised by the Natural History Museum of Crete and Ellinogermaniki Agogi.



Teachers debating science in science cafés / Visit to the Natural History Museum of Crete (July 6th)



In today's world of rapid scientific and technological developments, it is of paramount importance to help citizens of all ages and backgrounds to develop a better understanding of the role science is playing in our life. One of the ways the scientific community has invented to reach the wider public is 'science cafés'. These informal events are relaxed social gatherings focused on promoting the public understanding of science. The summer school participants will have the opportunity to explore the potential of science cafés, by participating in relevant discussions and a science café activity in the provoking environment of the Natural History Museum of Crete. Applications on mobile phones and the 3D world of Second Life will add to the excitement, demonstrating ways in which technology can facilitate and extend science café experiences. This activity will be organised in collaboration with SciCafe (<http://www.scicafe.eu>), Europe's Science Cafés Network supported by the European Commission (FP7-Science in Society).