

Approche intégrée de la robotique dans les cours de physique par des laboratoires

2011-1-HR1-LEO05-00828

<http://www.adam-europe.eu/adam/project/view.htm?prj=8945>

Information sur le projet

Titre: Approche intégrée de la robotique dans les cours de physique par des laboratoires

Code Projet: 2011-1-HR1-LEO05-00828

Année: 2011

Type de Projet: Projets de transfert d'innovation

Statut: Accordé

Pays: HR-Croatie

Accroche marketing: Le but du projet INFIRO était de développer de nouvelles pratiques et méthodes pour l'enseignement de matières pratiques telles que la robotique, la méca-tronique et l'électronique grâce à un laboratoire sco-laire intuitif. Simultanément les laboratoires permettent d'apprendre des compétences informatiques et une compréhension basique des sujets plus fonda-mentaux tels que la physique et les mathématiques. Des environnements d'apprentissage réels et virtuels dans les leçons en laboratoire répondent au besoin d'une mise en œuvre pratique des connaissances les plus demandées par les employeurs, ainsi que des compétences générales scientifiques adéquates né-cessaires à l'apprentissage des employés tout au long de leur vie.

Résumé: In the project proposal we outlined the following outcomes:

- (i) implementation, adaptation and enhancement of existing ComLab courses, software and equipment according to the curriculum of vocational secondary schools,
- (ii) development and design of new courses, software and laboratory equipment,
- (iii) implementation of low-cost and freeware, open-source software,
- (iv) integration of "conventionally hard" physics concepts in attractive robotics environment,
- (v) development of new practices and methods for teaching integrated approach in school laboratory,
- (vi) dissemination of this innovative equipment and approach across vocational schools in all partner countries and wider in Europe, establishing "International Summer Schools in Robotics and Electronics".

Through analysis of 15 crucial points, which we stated as the project results or products, we will show that all six declared outcomes are present in our work. Moreover, it should be visible that all our efforts and strategies went in a direction specified in the project proposal. Within the project developing documentation (e.g. consortium minutes and reports) we are documenting our attitude in progress control with respect to 8 declared work-packages. We were permanently insisting on a proper synchronization of all consortium activities.

Description: Partners involved in the consortium originate from different educational fields; university science education (P0, P6), university technical education (P4), university pedagogical education (P1), vocational schools (P2,P3) and educational agency (P5). Different primary orientations of partners and their institutions can be disadvantage if the work plan is inadequately scheduled, on contrary if one is aware of diversity in consortium you can redistribute jobs in a way that this variety become advantage. Collaboration between Slovenian and Croatian partner coordinators (Kocijani and Androi) actually originates from year 2009. Both of them then held workshop for Croatian physics teachers. This collaboration continues through Summer Schools of young physicists and finally transforms in the official international collaboration when in year 2011 first LdV-Tol projects were open to be governed by Croatian promoters. Communication with Romanian and Turkish partner organizations arises at a period of LdV project planning. So the whole project timing was scheduled in a sense that we can start very quickly with intensive transfer of innovation between

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Croatian and Slovenian members of consortium giving to Romanian and Turkish partners adjusting time through the first international summer school. But on the second international summer school Turkish partner has very distinguished role in preparing advanced robotics international laboratory called mini sumo robot project. Students from Romania and Turkey were included very successfully inside international robotics group, too.

Thèmes:	<ul style="list-style-type: none"> *** Orientation professionnelle ** Utilisation et diffusion de résultats ** Étude interculturelle ** Développement durable ** TIC ** Formation tout au long de la vie ** Formation continue ** Formation initiale * Enseignement supérieur * Formation ouverte et à distance * Égalité des chances
Sectors:	<ul style="list-style-type: none"> *** Enseignement ** Activités Spécialisées, Scientifiques Et Techniques * Information et Communication
Types de Produit:	<ul style="list-style-type: none"> CD-ROM Matériel pour l'enseignement Modules Méthodes de distribution Méthodes d'évaluation Site Internet Enseignement à distance Matériel d'apprentissage
Information sur le produit:	<ul style="list-style-type: none"> Unanticipated benefits

From the beginning we knew that the basic robotics one week curriculum works fine because for years it exists and it was well tested in Slovenian schools. But diversity of ideas within so called advanced electronics and especially robotic lab we could not expect. For example Turkish mini sumo robot exercise was a surprising complete success. We are always asked by people from media about this laboratory.

Transfer strategy

Because Croatian and Slovenian scholar systems originates from the same, so called Central European education system, our knowledge resources of teachers are comparable. Crucial difference is in the fact that robotics and electronics are more present in Slovenian primary schools than in Croatian. On a level of vocational schools there are also many similarities. Widely present problem is that in Croatia and also in Slovenia a certain number of teachers and trainers prefer traditional electrical engineering approach with a lot of knowledge pre-requests before actual doing by hands is started. This attitude cannot be changed by the force or by prescribed programs. Only good examples, like summer schools and camps on electronics and robotics, can change that attitude. So in our two summer schools we had dozens of different teachers and trainers without forcing them to be directly involved in our laboratory activities. General rule is that you can quickly change equipment but people are changing slowly.

Sectorial perspective

Our activities, geographically speaking, are not divided by borders. Actually there are no significant differences between Croatian and Slovenian schools. Romanian partner and Turkish partner were involved in summer schools with smaller number of teachers so we expect indirect effect to their scholar system. It is worth to notify that partners from vocational schools are geographically close to the Croatian and

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Slovenian border.

Our Strategy

The best parts of our strategy are learning through example and learning with pupils' own speed. Do the things by head and hands. These principles are valid for both, teacher education and student education.

Impact

All the time we were teachers/trainers and students oriented. Learning itself is synergic process between teachers and pupils.
We have quantitative parameters that show our success by measuring interests for summer schools and camps, but also by growing interest for showrooms in elementary schools and gymnasiums with humanistic curricula.

Target Areas

We notify especially significant interest in Istria. Sometimes it is related to teachers' engagement itself, but also to the local economy with growing informatics and electrotehnics companies.
Croatian and Slovenian subsection of consortium can act as a very compact group either geographically or by forming the common: program point of view. Romanian partner is coming from the field of educational agency so impact of INFIRO good practice can be propagated from above. Turkish partner is from technical education field and their connection and eminent role inside INFIRO collaboration is a good reference for future activities.

Result and feedback

It is clearly visible from the project proposal that we promised to handle with variety of problems in vocational education related to robotics, electronics and even physics and informatics field. Our primary goal is to change education paradigm in which particular knowledge is subject of particular reduced educational process. Our approach is clearly interdisciplinary. This fact is making our schools/camp not perceived as uninteresting school so even less capable students achieving results in learning by hand environment. So interest in our activities is not merely from talented and high motivated student population, but also from a domain of "ordinary" students.

Aims of dissemination

Our dissemination is different in a case of different target population. Generally it is easier to motivate young people and students for learning robotics and electronics. Advertising our way of teaching approach between teachers and trainers population is a little bit difficult because we have to straggle with a lot of prejudice formed by previous experience. Most efficient dissemination is in teaching student population because they learning and learning how to teach others almost concurrently.

National VET System

National VET system is a far to be perfect. Society is in long turn economic crises and very often can be heard that we are not producing adequate working potential in the current vocational school systems. Our project is strongly supporting technical education which is not always properly represented in vocational schools curricula. We have, as consortium, good experience for now vocational school curriculum improvements.
For partners' society situation is the same. Any good practice and experience in the technical education is always welcome because their societies are also overcrowded with young people without any/proper technical education or training.

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Sustainability

We have impact on young growing companies interested in technically and scientifically good educated persons. During project period we demonstrated our work to them. They support our activities through showrooms and exhibitions, booth during the first and the second summer school.

There are two types of influences. One way is through direct individual teacher to teacher connection. Our teachers of technical education have a sort of permanent education obligatory seminars. The second way is through educational system itself. Some partners are coming from universities where they teaching are educating young teachers. Promoting our work through university learning we can develop good impact. Unfortunately I must say that future teacher and trainers work (today students) is not satisfactorily valorised through LdV-Tol financial scheme.

We are planning to develop our collaboration through meetings around summer school events. Actually we arranged the third summer school in Slovenia in summer 2014. General financial scheme is that we can count on self-financing of students, sponsors support for teacher and trainers, and hardware support and equipment is from remaining resources of current project. We are also planning new project with novel additional value.

Page Web du projet: <http://infiro.pmf.unizg.hr/>

Contractant du projet

Nom: University of Zagreb, Faculty of Science
Ville: Zagreb
Pays/Région: Zagrebacka regija
Pays: HR-Croatie
Type d'organisation: Université/école supérieure spécialisée/academie
Site Internet: <http://www.unizg.hr/>

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Pays: HR-Croatie
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Partenaire

Partner 1

Nom: Faculty of Science - Physics Department
Ville: Zagreb
Pays/Région: Zagrebacka regija
Pays: HR-Croatie
Type d'organisation: Université/école supérieure spécialisée/academie
Site Internet: <http://www.pmf.unizg.hr/>

Partner 2

Nom: Association for Education and Sustainable Development
Ville: Calarasi
Pays/Région: Sud Est
Pays: RO-Roumanie
Type d'organisation: Formation initiale
Site Internet: <http://www.aesd.ro>

Partner 3

Nom: Karabuk University, Faculty of Technology
Ville: Karabük
Pays/Région: Balikesir
Pays: TR-Turquie
Type d'organisation: Autres
Site Internet: <http://www.karabuk.edu.tr>

Partner 4

Nom: Elektrostrojarska škola Varaždin
Ville: Varaždin
Pays/Région: Sredisnja Hrvatska
Pays: HR-Croatie
Type d'organisation: Institution publique
Site Internet: <http://www.ess.hr/>

Partenaire

Partner 5

Nom: University of Ljubljana, Faculty of Education
Ville: LJUBLJANA
Pays/Région: Slovenija
Pays: SL-Slovénie
Type d'organisation: Autres
Site Internet: <http://www.uni-lj.si>

Partner 6

Nom: Srednja škola Mate Blažine
Ville: Labin
Pays/Région: Jadranska Hrvatska
Pays: HR-Croatie
Type d'organisation: Institution de formation continue
Site Internet: <http://www.ssmb.hr/>

Données du projet

Certificate of Participation 2012.pdf

<http://www.adam-europe.eu/prj/8945/prj/Certificate%20of%20Participation%202012.pdf>

INFIRO Summer School 2012:
Certificate of Participation

Certificate of Participation 2013.pdf

<http://www.adam-europe.eu/prj/8945/prj/Certificate%20of%20Participation%202013.pdf>

INFIRO Summer School 2013:
Certificate of Participation

DRTI Plakat 2012.pdf

<http://www.adam-europe.eu/prj/8945/prj/DRTI%20Plakat%202012.pdf>

Infiro Summer School 2012 Slovenian Advertising Material

E2.CM1.INFIRO Ljubljana minutes.pdf

<http://www.adam-europe.eu/prj/8945/prj/E2.CM1.INFIRO%20Ljubljana%20minutes.pdf>

Minutes from 1st Consortium meeting held in Ljubljana; January 2012.

E2.CM2.INFIRO Annual meeting 2012.pdf

<http://www.adam-europe.eu/prj/8945/prj/E2.CM2.INFIRO%20Annual%20meeting%202012.pdf>

Minutes from 2nd Consortium meeting held in Rabac; Juny 2012.

E2.CM3.INFIRO Annual meeting 2013.pdf

<http://www.adam-europe.eu/prj/8945/prj/E2.CM3.INFIRO%20Annual%20meeting%202013.pdf>

Minutes from 3rd Consortium meeting held in Rabac; Jane 2013.

E2.CM4.INFIRO Zagreb minutes.pdf

<http://www.adam-europe.eu/prj/8945/prj/E2.CM4.INFIRO%20Zagreb%20minutes.pdf>

Minutes from 4th Consortium meeting held in Zagreb; November 2013.

Glas Istre -- 3.July 2013.pdf

<http://www.adam-europe.eu/prj/8945/prj/Glas%20Istre%20--%203.July%202013.pdf>

Glas ISTRE, 3.July 2013.
Article about 2nd Summer School

Hrvatska Televizija -- Regionalni Dnevnik -- 25.June 2013.avi

<http://www.adam-europe.eu/prj/8945/prj/Hrvatska%20Televizija%20--%20Regionalni%20Dnevnik%20--%2025.June%202013.avi>

INFIRO presented on HRT1:
National Croatian Television Informative Program (2 min)

Hrvatska televizija -- Regionalni dnevnik -- 25.June 2013.html

<http://www.adam-europe.eu/prj/8945/prj/Hrvatska%20televizija%20--%20Regionalni%20dnevnik%20--%2025.June%202013.html>

INFIRO presented on HRT1:
National Croatian Television
Informative Program (2 min)

Hrvatski Radio -- Oko Znanost -- 6. Dec 2013.html

<http://www.adam-europe.eu/prj/8945/prj/Hrvatski%20Radio%20--%20Oko%20Znanost%20--%206.%20%20Dec%202013.html>

INFIRO presented on HR1:
Croatian Nationa Radio
Oko Znanosti (20 min)

Données du projet

INFIRO presented on HR1:
Croatian National Radio
Oko Znanosti (20 min)

Hrvatski Radio -- Oko Znanost -- 6. Dec 2013.mp3

<http://www.adam-europe.eu/prj/8945/prj/Hrvatski%20Radio%20--%20Oko%20Znanost%20--%202013.mp3>

INFIRO presented on HR1:
Croatian National Radio
Oko Znanosti (20 min)

Hrvatski Radio -- Znanost i društvo -- 29. Jan 2014.html

<http://www.adam-europe.eu/prj/8945/prj/Hrvatski%20Radio%20--%20Znanost%20i%20dru%C5%A1tvo%20--%202014.html>

INFIRO presented on HR3:
Croatian National Radio
Znanost i društvo (30 min)

Hrvatski Radio -- Znanost i društvo -- 29. Jan 2014.mp3

<http://www.adam-europe.eu/prj/8945/prj/Hrvatski%20Radio%20--%20Znanost%20i%20dru%C5%A1tvo%20--%202014.mp3>

INFIRO presented on HR3:
Croatian National Radio
Znanost i društvo (30 min)

InFiRo-CD.iso

<http://www.adam-europe.eu/prj/8945/prj/InFiRo-CD.iso>

InFiRo CD-ROM (iso-format)

INFIRO Conference 2013 Poster.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Conference%202013%20Poster.pdf>

INFIRO International Conference on
Robotics, Electronics and Computerized laboratory 2013
Poster 2013

INFIRO DEMO Nautilus.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20DEMO%20Nautilus.pdf>

INFIRO Summer School demonstrations:
Nautilus - Submarine Robot

INFIRO.Electricity.Visula.Book.iso

<http://www.adam-europe.eu/prj/8945/prj/INFIRO.Electricity.Visula.Book.iso>

INFIRO Electricity Visual Book

InFiRo.exe

<http://www.adam-europe.eu/prj/8945/prj/InFiRo.exe>

InFiRo Software installation CD (Ver.1.00)

INFIRO First Report on testing and evaluation.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20First%20Report%20on%20testing%20and%20evaluation.pdf>

First internal report on testing and evaluation

Données du projet

INFIRO.html

<http://www.adam-europe.eu/prj/8945/prj/INFIRO.html>

INFIRO Web Portal

INFIRO Mini Sumo Robot Report.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Mini%20Sumo%20Robot%20Report.pdf>

INFIRO:
Mini Sumo Robot Report

INFIRO Proceedings; ISBN-9536002787.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Proceedings%3B%20ISBN-9536002787.pdf>

INFIRO Proceedings

INFIRO Report on needs analysis.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Report%20on%20needs%20analysis.pdf>

First Report on Needs Analysis

INFIRO Report on Summer Schools Activities.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Report%20on%20Summer%20Schools%20Activities.pdf>

INFIRO Report on Summer School activities

INFIRO Robotics and Electronics Course Book; ISBN-9536002779.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Robotics%20and%20Electronics%20Course%20Book%3B%20ISBN-9536002779.pdf>

INFIRO Robotics and Electronics Course Book

INFIRO Summer School 2012 Report and Conclusions.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Summer%20School%202012%20Report%20and%20Conclusions.pdf>

INFIRO Summer School 2012 Report and Conclusions

INFIRO Summer School 2013 Report and Conclusions.pdf

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Summer%20School%202013%20Report%20and%20Conclusions.pdf>

INFIRO Summer School 2013 Report and Conclusions

INFIRO Summer School Poster 2012.jpg

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Summer%20School%20Poster%202012.jpg>

INFIRO Summer School Poster 2012

INFIRO Summer School Poster 2013.jpg

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Summer%20School%20Poster%202013.jpg>

INFIRO Summer School Poster 2013

INFIRO Summer School Video Minutes -- Rabac -- 2012.mp4

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Summer%20School%20Video%20Minutes%20--%20Rabac%20--%202012.mp4>

INFIRO 2012 Video minutes:
1st International Summer School on Robotics, Electronics and Computerized Laboratory

Données du projet

INFIRO Summer School Video Minutes -- Rabac -- 2013.mp4

<http://www.adam-europe.eu/prj/8945/prj/INFIRO%20Summer%20School%20Video%20Minutes%20--%20Rabac%20--%202013.mp4>

INFIRO 2013 Video minutes:

2nd International Summer School on Robotics, Electronics and Computerized Laboratory

Metodika.html

<http://www.adam-europe.eu/prj/8945/prj/Metodika.html>

Link to INFIRO video pages on Metodika

Pouavanje izbornoga predmeta elektronika s robotikom ver.0.4.HR.pdf

<http://www.adam-europe.eu/prj/8945/prj/Pou%C4%8Davanje%20izbornoga%20predmeta%20elektronika%20s%20robotikom%20ver.0.4.HR.pdf>

Electronics working materials for teachers and trainers, Croatian language translation. Reviseted version for The First International Summer School of Robotics, Electronics and Computerized Laboratory used by Croatian teachers

Profil tehnic; AESD.mp4

<http://www.adam-europe.eu/prj/8945/prj/Profil%20tehnic%3B%20AESD.mp4>

AESD Electronics laboratory learning presented

Radio Istra -- Ponedjeljkom otvoreno -- 8. July 2013.mp3

<http://www.adam-europe.eu/prj/8945/prj/Radio%20Istra%20--%20%20Ponedjeljkom%20otvoreno%20--%208.%20July%202013.mp3>

INFIRO presented on Radio ISTR:

Croatian Regional Radio

Ponedjeljkom otvoreno (30 min)

Radio Labin -- 23. June 2013.mp3

<http://www.adam-europe.eu/prj/8945/prj/Radio%20Labin%20--%2023.%20June%202013.mp3>

INFIRO presented on Radio Labin:

Croatian Local Radio

Introduction (2:40 min)

Summer School 2012 Program.pdf

<http://www.adam-europe.eu/prj/8945/prj/Summer%20School%202012%20Program.pdf>

PROGRAM OF THE FIRST

International Summer School of Robotics, Electronics and Computerized Laboratory

Summer School 2013 Program.pdf

<http://www.adam-europe.eu/prj/8945/prj/Summer%20School%202013%20Program.pdf>

PROGRAM OF THE SECOND

International Summer School of Robotics, Electronics and Computerized Laboratory

Produits

- 1 6 Upgrading ComLab software
- 2 11 Project website
- 3 4 Set of sensors and actuators
- 4 5 Upgrading data acquisition module
- 5 7 Modification and adaptation of the ComLab Courses
- 6 3 Report on needs analyses
- 7 15 Communication benefits
- 8 1 Management strategies
- 9 2 Questionnaire on needs analyses
- 10 8 New course material related to electricity
- 11 9 Questionnaire on testing and evaluation
- 12 10 Report on testing and evaluation
- 13 12 Project final conference
- 14 13 All parties interested in technical education, autonomous learners
- 15 14 Interdisciplinary approach benefits

Produit '6 Upgrading ComLab software'

Titre: 6 Upgrading ComLab software

Type de Produit: CD-ROM

Texte marketing: First version of INFIRO software package: INFIRO Software installation CD (Ver.1.00) was issued in May 2012 by Slovenian partner

Description: Although some software solutions appear as novel to other partners, habitually they have a lot of previous experiences to quickly accept new INFIRO software release. Because on the first summer school Slovenian mentors were completely engaged in leading robotics lab, Croatian, Romanian and Turkish mentor had perfect time to concentrate themselves on problematic parts in INFIRO software. From this point electronic lab software appears less problematic ensuring to Croatian mentors successful leading of electronic labs.

Cible: Teachers, trainers

Résultat: For teacher and trainers from field of electrotehnics, electronics and robotics software issues are almost unimportant because they have enough experience to quick adjustment. For physics teachers, involved in project, software issue stands as a potential problem. For some of them it was first contact with such kind of programs.

Domaine d'application: Software

Adresse du site Internet: <http://metodika.phy.hr/~dandroic/INFIRO/INFIRO%20Setup.exe>

Langues de produit: anglais

product files

InFiRo-CD.iso

<http://www.adam-europe.eu/prj/8945/prd/1/1/InFiRo-CD.iso>
INFIRO Software Installation CD Image

InFiRo.exe

<http://www.adam-europe.eu/prj/8945/prd/1/1/InFiRo.exe>
INFIRO Software Installation Program

Produit '11 Project website'

Titre: 11 Project website

Type de Produit: Site Internet

Texte marketing: We establish Multilanguage Web Portal dedicated to our activity

Description: During the first year of the project portal was dominantly used for partners to regularly exchange information, software and ideas. We use a portal as a window for the most fundamental information related to Summer School.
We expect more benefit of Portal in our future activities. It should be the reference point for future collaboration.

Cible: Teachers, Trainers, management, students, parents, General population

Résultat: Portal definitely improves communication abilities of Consortium not only in professional sense but also related to management benefits, because partners have to exchange a lot of administrative material during projects we are finishing now.

Domaine d'application: Internet wide

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: croate
turque
slovène
roumain
anglais

product files

INFIRO.html

<http://www.adam-europe.eu/prj/8945/prd/2/1/INFIRO.html>
INFIRO Portal

Metodika.html

<http://www.adam-europe.eu/prj/8945/prd/2/1/Metodika.html>
metodika.phy.hr (INFIRO Media server)

Produit '4 Set of sensors and actuators'

Titre: 4 Set of sensors and actuators

Type de Produit: Modules

Texte marketing: According to the project proposal, it was supposed that P1, Slovenian partner should prepare optimal set of electronic parts and minimal set for compatible robotics laboratory as a start-up kit for all INFIRO partners.

Description: They (P1) have some variants used in previous projects (Comlab). So, in order to achieve the project proposed additional value with respect to physics expected results, INFIRO needs some sort of standardized tools before innovation transfer. Slovenian partners deliver to other partners, with a little delay, standardized set of electronic/robotics tools and hardware. It was kind of basic laboratory kit consistent with P1 learning material specially prepared for partners of INFIRO project and shaped according general remarks acquired during kick-off meeting in Ljubljana. Also some particular partners' requirements and objections are installed. Partners are encouraged to modify, translate or improve materials. This set represents standard for the First Summer School for Basic Electronics Courses completely and for Basics Robotics Courses partially.

Cible: Teachers, Trainers

Résultat: Evaluation of the first summer school shows how this set of successful finishing fruitfully fulfils the courses task. During project duration several modifications were done but always keeping in mind backward compatibility of basic set.

Domaine d'application: Education. Technics

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: anglais

product files

INFIRO.html

<http://www.adam-europe.eu/prj/8945/prd/3/1/INFIRO.html>
INFIRO portal

Metodika.html

<http://www.adam-europe.eu/prj/8945/prd/3/1/Metodika.html>
Metodika
INFIRO promoting web site; Physics education methodology site of Physics Department, Faculty of Science

R-Analysis_Arduino16_02.pdf

http://www.adam-europe.eu/prj/8945/prd/3/1/R-Analysis_Arduino16_02.pdf
Arduino notice supplement

Produit '5 Upgrading data acquisition module'

Titre: 5 Upgrading data acquisition module

Type de Produit: Modules

Texte marketing: Data acquisition module is very important for standardizing consistency of used hardware and software modules inside robotics lab.

Description: Generally it is unacceptable in education environment to use little bit different codes for same purposes. Because consortium members originate from different scholar systems small variations in hardware and software code depend on different philosophy of educational environment or current market availability. Standardization is needed if one likes to keep good communication condition and added value consistency.

Cible: Teachers, Trainers, Research

Résultat: Slovenian partner has secured majority of hardware equipment (the remainder Croatian partners) for the first International Summer School of robotics, electronics and computerized laboratory. Delivery of electronic packages, with special emphasis on their controller required for robotic laboratory, was done. Hardware and test equipment needed for the activities for the second summer school was chosen according to the first year experience. Turkish partner demonstrated their robotic ideas through so called Sumo robots, a very interesting piece of electronics which contains all substantial ideas in robot manufacture.

Slovenian partner P1 ensures proper data acquisition module for robotics lab during the entire period of project duration. We test prerequisites using apparatuses not only during summer school activities but also during school preparation, by different technicians in different countries.

Domaine d'application: Education, Computer communication

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: anglais

product files

R5-First Report on hardware testing and evaluation.pdf

<http://www.adam-europe.eu/prj/8945/prd/4/1/R5-First%20Report%20on%20hardware%20testing%20and%20evaluation.pdf>

R5:

First Report on hardware testing and evaluation

Produit '7 Modification and adaptation of the ComLab Courses'

Titre: 7 Modification and adaptation of the ComLab Courses

Type de Produit: Matériel pour l'enseignement

Texte marketing: INFIRO electronics and robotics book is final result of our 2 year activity.

Description: On the first and second summer school we used translated variants of P1 prepared software. General idea was that written material should be minimized. If you really like to propagate laboratory working you have to avoid unnecessary lessoning.

Cible: Students, Summer school teachers

Résultat: A book contains basic approach, how to start with INFIRO software and hardware. Although we are attaching paper version, its main purpose is to be electronic quick cookbook. Some dynamical aspects of material is implemented through QR code.

Domaine d'application: Education, Self-education

Adresse du site Internet: <http://metodika.phy.hr/~dandroic/INFIRO/INFIRO%20Robotics%20and%20Electronics%20Course%20Book%3b%20ISBN-9536002779.pdf>

Langues de produit: slovène
anglais
turque
croate
roumain

product files

INFIRO Robotics and Electronics Course Book; ISBN-9536002779.pdf

<http://www.adam-europe.eu/prj/8945/prd/5/1/INFIRO%20Robotics%20and%20Electronics%20Course%20Book%3B%20ISBN-9536002779.pdf>
INFIRO Robotics and Electronics Course Book

Pouavanje izbornoga predmeta elektronika s robotikom ver.0.4.HR.pdf

<http://www.adam-europe.eu/prj/8945/prd/5/1/Pou%C4%8Davanje%20izbornoga%20predmeta%20elektronika%20s%20robotikom%20ver.0.4.HR.pdf>
Croatian translation of Electronics course book

Produit '3 Report on needs analyses'

Titre: 3 Report on needs analyses

Type de Produit: Méthodes de distribution

Texte marketing: Needs analysis job can be crudely separated on two major tasks related to hardware and software components which are certainly correlated on some extent.

Description: Report comes with paradigm which we obeyed during all period of project duration.

Cible: Teachers, Trainers Management

Résultat: Paradigm:

- 1) Hardware solutions should be based on Open hardware and well documented (low cost) hardware components
- 2) Software we are using should be from domain of Open software or software under Creative Commons License
- 3) We should promote Laboratory approach (self-research and working with hands and brain concurrently)
- 4) We should reduce our pre reading/learning material
- 5) We should reduce verbal teaching to the lowest possible level
- 6) We should support modular design in hardware and software solutions whenever is possible
- 7) All our final and intermediate products should be freely distributable (CC License)

Domaine d'application: Education - Organization

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: anglais

product files

R3-Report on needs analysis.pdf

<http://www.adam-europe.eu/prj/8945/prd/7/1/R3-Report%20on%20needs%20analysis.pdf>
R3-The First Report on needs analysis prepared by Project Coordinator

R3-Sumo Robot Report.pdf

<http://www.adam-europe.eu/prj/8945/prd/7/1/R3-Sumo%20Robot%20Report.pdf>
R3-Sumo Robot Report;
Prepared by partner P4

Produit '15 Communication benefits'

Titre: 15 Communication benefits

Type de Produit: Autres

Texte marketing: Portal structure of the website with private partner's pages

Description: Consortium official language was English, but Slovenian and Croatian partners use benefit of mutual understanding, especially on teachers' level. On first summer school we notify certain language barrier in student population, so they prefer to use English in mutual Croat-Slovenian communication. On second summer school we notify that in mixed group students in solving problem mode usually overcome language gaps. This was also visible during nonofficial meetings in free time.

Cible: Teachers. Students

Résultat: First Summer School brought together 52 students (VII, VIII Primary and secondary school) from Slovenia (19) and Croatia (33). 46 teachers, professors, university teachers, and technical engineers were present during Summer School in our improvised laboratory in Rabac. On the side-lines of the school held a series of meetings and consultations with experts not only from various fields, but also from different countries. Demonstrating workshops and laboratories were done day by day aside each other. The various educational and motivational methods were discussed and new ideas and "different opinions" were then implemented in the next year of Summer School 2013. Summer school demonstrates that laboratory approach is more fruitful approach to teaching very difficult subjects like electronics.

Domaine d'application: Education, Learning, Open society

Adresse du site Internet: <http://metodika.phy.hr/infiro/>

Langues de produit: turque
roumain
slovène
croate
anglais

product files

Certificate of Participation 2012.pdf

<http://www.adam-europe.eu/prj/8945/prd/8/1/Certificate%20of%20Participation%202012.pdf>
Certificate of Participation on INFIRO Summer School 2012

Certificate of Participation 2013.pdf

<http://www.adam-europe.eu/prj/8945/prd/8/1/Certificate%20of%20Participation%202013.pdf>
Certificate of Participation on INFIRO Summer School 2013

DRTI Plakat 2012.pdf

<http://www.adam-europe.eu/prj/8945/prd/8/1/DRTI%20Plakat%202012.pdf>
INFIRO summer school 2012 --
DRTI Poster

Hrvatska Televizija -- Regionalni Dnevnik -- 25.June 2013.mp4

<http://www.adam-europe.eu/prj/8945/prd/8/1/Hrvatska%20Televizija%20--%20Regionalni%20Dnevnik%20--%2025.June%202013.mp4>
INFIRO on National TV

product files

INFIRO Summer School Poster 2012.jpg

<http://www.adam-europe.eu/prj/8945/prd/8/1/INFIRO%20Summer%20School%20Poster%202012.jpg>
INFIRO summer school 2012 --
Poster

INFIRO Summer School Poster 2013.jpg

<http://www.adam-europe.eu/prj/8945/prd/8/1/INFIRO%20Summer%20School%20Poster%202013.jpg>
INFIRO summer school 2013 --
Poster

Summer School 2012 Program.pdf

<http://www.adam-europe.eu/prj/8945/prd/8/1/Summer%20School%202012%20Program.pdf>
INFIRO summer school 2012 --
Program

Summer School 2013 Program.pdf

<http://www.adam-europe.eu/prj/8945/prd/8/1/Summer%20School%202013%20Program.pdf>
INFIRO summer school 2013 --
Program

Produit '1 Management strategies'

Titre: 1 Management strategies

Type de Produit: Méthodes de distribution

Texte marketing: Partners involved in the consortium originate from different educational fields: university science education (P0, P6), university technical education (P4), university pedagogical education (P1), vocational schools (P2, P3) and educational agency (P5). Different primary orientations of partners are very important to find common point of mutual interest. Adjusting project proposed jobs on most suitable way for successful completion requires management's skills and virtue, both organizational and financial.

Description: We can split management strategies in three subsequent levels:

1st level: Developed management strategies before project actually starts. Most important part was finding common partner's interests in project writing period in order to prepare future activities on more transparent way.

2nd level: Period between the project's programs were accepted and first (kick-off) meeting which defines main directions for oncoming period until next collaboration meeting ; in our case it was the 1st Annual meeting on Summer school margins.

3rd level: Using consortium meetings as control points with respect to what has been done and plan for period until the next collaboration meeting.

We cycle this form until the end, actually on last consortium meeting in Zagreb in late November 2013 we discussed future modes of collaboration.

Cible: Primary partners, secondary the target groups (teachers and students)

Résultat: On margins of INFIRO concluding conference we held a round table dedicated to future partners activities and possibilities of oncoming collaborations. We find that Summer School or Robotics Camps, based on one INFIRO week robotics laboratory curriculum, is a good base for propagating active learning by head and hands among students and teachers whom are technically oriented population.

Domaine d'application: Financial, Education

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: slovène
anglais
croate

product files

E2.CM1.INFIRO Ljubljana minutes.pdf

<http://www.adam-europe.eu/prj/8945/prd/9/1/E2.CM1.INFIRO%20Ljubljana%20minutes.pdf>
Minutes from 1st Consortium meeting held in Ljubljana; January 2012.

E2.CM2.INFIRO Annual meeting 2012.pdf

<http://www.adam-europe.eu/prj/8945/prd/9/1/E2.CM2.INFIRO%20Annual%20meeting%202012.pdf>
Minutes from 2nd Consortium meeting held in Rabac; Jane 2012.

E2.CM3.INFIRO Annual meeting 2013.pdf

<http://www.adam-europe.eu/prj/8945/prd/9/1/E2.CM3.INFIRO%20Annual%20meeting%202013.pdf>
Minutes from 3rd Consortium meeting held in Rabac; Jane 2013.

product files

E2.CM4.INFIRO Zagreb minutes.pdf

<http://www.adam-europe.eu/prj/8945/prd/9/1/E2.CM4.INFIRO%20Zagreb%20minutes.pdf>
Minutes from 4th Consortium meeting held in Zagreb; November 2013.

R1.HR Partners Agreement.pdf

<http://www.adam-europe.eu/prj/8945/prd/9/1/R1.HR%20Partners%20Agreement.pdf>

R1:

HR Partners agreement about merging finances in favour of logistics for Summer School 2013

R1-P0.P1.Agreement.pdf

<http://www.adam-europe.eu/prj/8945/prd/9/1/R1-P0.P1.Agreement.pdf>

R1:

P0,P1 Agreement about sharing expansess

R1-Transportation.pdf

<http://www.adam-europe.eu/prj/8945/prd/9/1/R1-Transportation.pdf>

R1:

Rational usage of transportation

R1-Way of calculating stuff costs.pdf

<http://www.adam-europe.eu/prj/8945/prd/9/1/R1-Way%20of%20calculating%20stuff%20costs.pdf>

R1:

Way of calculating stuff costs

Produit '2 Questionnaire on needs analyses'

Titre: 2 Questionnaire on needs analyses

Type de Produit: Procédure pour l'analyse et le pronostic des besoins de la formation professionnelle

Texte marketing: All partners already participated in needs analyses during preparation of the proposal through consultancy with selected schools representatives in their countries. Principal Partner took the results of these versatile questionnaires, tests and evaluation into consideration.

Description: All partners have been also informed about ComLab achievements so rough idea about needed resources was on the air. First determination of needed objects (laboratory equipment, controllers, computers, course material, lab exercises and applications, software, etc.) happened during first kick-off meeting in Ljubljana. Slovenian partner P1 has nice ability to show other, in live, their hardware and software solutions. So everyone has ability to decide the content of their new questionnaires and tests. All partners promised to carry out interviews with the teachers at the target schools. Even during the first consortium meeting it was clear that simple surveys can't solve all dilemmas related to complex robotics subjects. So we decided that questionnaires usage will be limited only to cases with very clear dilemmas where opposite looking solutions appears.

Cible: Teachers, Trainers

Résultat: Our needs analysis work comes with conclusion/compromises respecting our procedures and courses:

1. We will use open hardware as a base for our robotics courses, consistent with already well tested P1 controller board.
2. We will use open software without prejudice especially if it meets our needs. Teachers can in principle choose freeware alternatives if they exists
3. A plenty of available paper education materials produced by Slovenian partners requires certain minimization. Main task of our project is not merely to cover the subjects of electronics and robotics with instructions/cookbooks but with a minimal version of it, reducing printed material enough to start individual work and exploration of subjects in electronics and robotics almost instantly.
4. Laboratory work has no alternative (like long lecturing, and pre knowledge requirements)
5. We will try to work with advanced level electronics and robotics in parallel for more expert population. In advanced courses even commercial software and hardware is allowed if that improves local school competences on global market.

Domaine d'application: Education, Preparatory activities

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: croate
anglais

product files

R2-Questionnaire on software needs.pdf

<http://www.adam-europe.eu/prj/8945/prd/10/1/R2-Questionnaire%20on%20software%20needs.pdf>
R2-Questionnaire on software needs,

product files

Prepared by partner P4

Produit '8 New course material related to electricity'

Titre: 8 New course material related to electricity

Type de Produit: Matériel pour l'enseignement

Texte marketing: Novel technique visual book

Description: We notify high education potential of robotics lab environment. Electronics lab on the other side includes less computer action, and visually looks very static. Sometime for some students whole laboratory represents only simple game and no profound understanding, so no adequate knowledge and skill, results after education cycle. Slovenian partner notify that sometimes problem is related to shallow physical knowledge if any at all. Partner P6 is from physics teaching domain, but without direct experience with robotics laboratory technique. In a mutual interaction of two kinds of experts we expected some new synergy.

Cible: Students

Résultat: It is very important that physics knowledge in laboratory environment doesn't appear as boring subject, but as valuable key for solving problems. We discovered that interactive simulation tools are always welcome.
Things mentioned above are especially important in advanced electronics laboratory and robotics problem lab.
Our program actually involves four different stages of competence with respect to the students' pre competences.
Basic electronics and robotics labs we are using as an introduction program advertising technical problems and thinking. Advanced laboratory exercises are on the other hand link with physical phenomenology.
They are, sui generis, more suitable for methodical shaping.

Domaine d'application: Education

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: anglais

product files

INFIRO.Electricity.Visual.Book.iso

<http://www.adam-europe.eu/prj/8945/prd/11/1/INFIRO.Electricity.Visual.Book.iso>
INFIRO Electricity, Visual Book

Produit '9 Questionnaire on testing and evaluation'

Titre: 9 Questionnaire on testing and evaluation

Type de Produit: Méthodes d'évaluation

Texte marketing: Questioners are very objective tool for testing end evaluation if you have standardized environment and you can collect reasonable representative statistics.

Description: Slovenian partner uses, for a number of years the testing of quality in their electronics and robotics campuses and schools. So it was natural that INFIRO accept their questioners for meaningful comparison. INFIRO summer school is always most referent event in controlled educational environment.

Cible: Students

Résultat: Results from first yeas inquiry motivate us to organize second International Summer School much better, in more suitable space where all activities are visible to everyone but without mutual nuisance.

Domaine d'application: Education

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: slovène
anglais
croate

product files

R9-Anketni list za udeležence.pdf

<http://www.adam-europe.eu/prj/8945/prd/12/1/R9-Anketni%20list%20za%20udeležence.pdf>
Anketni list za udeležence

R9-INFIRO Summer School survey.pdf

<http://www.adam-europe.eu/prj/8945/prd/12/1/R9-INFIRO%20Summer%20School%20survey.pdf>
Survey for participants
INFIRO ROBOTICS AND ELECTRONICS DESIGNED SUMMER SCHOOL

Produit '10 Report on testing and evaluation'

Titre: 10 Report on testing and evaluation

Type de Produit: Méthodes d'évaluation

Texte marketing: Summer schools of Technology Education are very effective learning pathway in open learning systems.

Description: Open learning refers to minimal constraints on access, pace and method of study. The term is often used to encourage traditional institutions to minimize barriers between themselves and aspiring learners. Object Learning is very important factor to boost and develop technological literacy which is in domain of Technology Education curriculum.

Cible: Teacher, trainer

Résultat: Student satisfaction can be experienced in a variety of situations and connected to teaching/learning. It is a highly personal assessment that is greatly affected by student expectations. Satisfaction also is based on the student's experience on both: contacts with the organization and personal outcomes. Evaluation is important in open education and it consists of different dimensions in alignment with the goals of a course or program. Course grades are often used as an indicator of student achievement in open instruction.

Domaine d'application: Education

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: anglais

product files

INFIRO Summer School 2012 Report and Conclusions.pdf

<http://www.adam-europe.eu/prj/8945/prd/13/1/INFIRO%20Summer%20School%202012%20Report%20and%20Conclusions.pdf>

R10:

INFIRO Summer School 2012 Report and Conclusions

INFIRO Summer School 2013 Report and Conclusions.pdf

<http://www.adam-europe.eu/prj/8945/prd/13/1/INFIRO%20Summer%20School%202013%20Report%20and%20Conclusions.pdf>

R10:

INFIRO Summer School 2013 Report and Conclusions

R10-Report on Summer Schools Activities.pdf

<http://www.adam-europe.eu/prj/8945/prd/13/1/R10-Report%20on%20Summer%20Schools%20Activities.pdf>

An Evaluation of INFIRO International Summer School

Produit '12 Project final conference'

Titre: 12 Project final conference

Type de Produit: Film

Texte marketing: Papers, demonstrations, participation on conferences and fairs, project final conference, articles in journals, etc.

Description: During the project duration partners promote their activities in collaboration supporting schools. Turkish partner promote their activities among technical environment while P1 and P6 promote INFIRO's idea in educational environment. It is projects', so called, official and obligatory advertisement. But we must say that also wider populations show interests in INFIRO activities. Especially our Summer school was adequately presented on Croatian National TV. Besides, INFIRO was presented several times on National Radio. Local media were also interested in our activities. Also, we produced two publications; One Multilanguage self-learning e-book, and another publication with collected works and ideas presented on INFIRO final conference.

Cible: teachers, trainers, general population

Résultat: At a moment it seems to us that we are at a beginning of growing significant interests. We have impression that transfer of technology actually occurred but we as a partners have a lot of unfinished jobs and not yet realized ideas.

Domaine d'application: information

Adresse du site Internet: <http://metodika.phy.hr/~dandroic/INFIRO/INFIRO%20Proceedings%3b%20ISBN-9536002787.pdf>

Langues de produit: anglais

product files

INFIRO Proceedings; ISBN-9536002787.pdf

<http://www.adam-europe.eu/prj/8945/prd/14/1/INFIRO%20Proceedings%3B%20ISBN-9536002787.pdf>
INFIRO Proceedings

Produit '13 All parties interested in technical education, autonomous learners'

Titre: 13 All parties interested in technical education, autonomous learners

Type de Produit: Matériel pour l'enseignement

Texte marketing: Robotics electronics cookbook

Description: During the project duration we struggle with dissimilar difficulties. We have tested a lot of different hardware and software solutions. Because different starting points of partners in consortium we have to negotiate with respect to every detail in order to reach meaningful and coherent objective. But from beginning, what is visible, in notes form our first consortium meeting held in Ljubljana, we have in mind unique and simple solution for self-learning or self-exploring. In a frame of advanced robotics laboratory we cultivate open source approach to hardware and software on market. Finding the most common features of all offered on today's market we have tried to make things as simple as it is reasonably possible. Result is our Robotics electronics cookbook.

Cible: Teacher, Students, General population

Résultat: One intention of simple electronics and robotics introductory course was to advertise technical education among students population, but we discovered that it can be very useful for improving teacher competences also. In real world not all teachers in vocational schools possess professional competences like teachers involved in our Consortium activities. For growing their competences it is very important to trace their first step in a field of electrotehnics and robotics through self-education and personal discovering.

Domaine d'application: education and self education

Adresse du site Internet: <http://infiro.pmf.unizg.hr/>

Langues de produit: croate
anglais
roumain
slovène
turque

product files

INFIRO Robotics and Electronics Course Book; ISBN-9536002779.pdf

<http://www.adam-europe.eu/prj/8945/prd/15/1/INFIRO%20Robotics%20and%20Electronics%20Course%20Book%3B%20ISBN-9536002779.pdf>
INFIRO Proceedings

Produit '14 Interdisciplinary approach benefits'

Titre: 14 Interdisciplinary approach benefits

Type de Produit:

Texte marketing: Summer school evaluation can partially discover meaning of interdisciplinary approach. Deeper insight is visible in schools with interdisciplinary approach elements in curricula.

Description: INFIRO project starts with clear idea of laboratory implementation of technical education from electronic, robotics and mechatronic field. Slovenian partner has long experience related technical education. They notify strong educational potential especially from modern robotics. Today informatics oriented learning becomes very common. Fundamental knowledge from field of physics, mathematics and chemistry looks to modern students like old fashioned knowledge with tedious background, although deeper understanding of the nature and its ecological aspects is strongly related with fundamental natural sciences. On the other side faculty of science is for years struggling with lack of interests for fundamental natural sciences. Particularly physics is very important for true understanding of robot movement and mechatronics. Partner P6-Faculty of science during project productive period tried to use high educational potential of robotics for in parallel learning deep physical principles of electricity and magnetism

Cible: Students, Schools, Teachers

Résultat: Vocational schools very often has no suitable physics curriculum, but even if physics education is present in education scheme students usually not connecting electrical phenomena shared in physics, electronics and robotics. Even tiny implementation of interdisciplinary methodology can make whole educational process more meaningful to students, resulting with better and active knowledge.

Domaine d'application: Education, vocational schools

Adresse du site Internet: <http://metodika.phy.hr/infiro/>

Langues de produit: anglais

product files

INFIRO Proceedings; ISBN-9536002787.pdf

<http://www.adam-europe.eu/prj/8945/prd/16/1/INFIRO%20Proceedings%3B%20ISBN-9536002787.pdf>
INFIRO proceeding book with samples of interdisciplinary LAB

Événements

INFIRO Consortium Closing Conference

Date 30.11.2013

Description 4th Consortium meeting

Cible partners

Public Événement non public

Informations de contact dandroic@phy.hr

Date et lieu Zagreb, 30.11.2013.

INFIRO Closing Conference

Date 29.11.2013

Description Oral presentation, Showroom of INFIRO ideas and projects

Cible Partners, Supporting Schools, Colaborators

Public Événement public

Informations de contact dandroic@phy.hr

Date et lieu 29.11.2013. Zagreb

Événements

INFIRO Consortium Annual Meeting 2013

Date 26.06.2013

Description Introductory notes by prof. Androi, regarding the project flow so far. Remarks are given by work package.

WP1 – Project management:

- All items successfully accomplished, final report to be completed

WP2 – Need analysis:

- Questionnaire on needs analyses – to be completed by Zagreb University (taken over from Romanian partners)

- Needs report – to be completed (preliminary report already completed)

WP3 – Course materials on electricity and electronics:

- All the practical job was done; new course material related to electricity, electrical machines, sensors and actuators, communication principles, control systems, machine construction etc. to be published as soon as possible.

- Course materials on basic electronics and basic robotics to be provided by Slovenian partners (12 < n pages (text, 12 points, normal MS Word style, pictures separately) < 10), in English, to Zagreb University partner, to be distributed to other partners for translation to other project languages. Course materials on basic electronics and basic robotics should be provided by July 7th.

- Other course materials (advanced courses) to be completed in the format of 12-16 pages of pure text, 12 point text; to be completed and translated to English by the end of August.

WP4 – Laboratory equipment:

- Documentation about the lab equipment will be made available at the website (datasheets, schematics etc.)

- All project partners involved with hardware should provide documentation on hardware provided

- Short summary – (one to two pages should be enough)

WP5 – Transferring, adopting and developing software

- Questionnaire on testing and evaluation; Report on testing and evaluation – questionnaires and short summary on software usage and evaluation to be completed (4 pages, in English, should be enough). Deadline (for Turkish partners) - by the end of August.

WP6 – Testing and evaluation:

- Questionnaire and report on testing and evaluation – already completed by Slovenian partners; to be delivered by Slovenian partners to Zagreb partners

WP7 – Dissemination and valorisation

- Web, CD/DVD, brochures

- Printed material

- Final conference

WP8 – International Summer School in Robotics and Electronics

- Overall, 2013. Summer School is seen as improvement over the 2012. School.

- Summary for Summer School to be completed (one page overall) – by 7th July.

Cible ALL partners

Public Événement non public

Informations de contact dandroic@phy.hr

Date et lieu Rabac
26.06.2013

Événements

2nd International Summer School of Robotics, Electronics and Computerized laboratory

Date	23.06.2013
Description	<p>Participants: 60 young pupils from vocational/elementary schools with distinguishing talent and motivation in learning electrotechnics and robotics</p> <ul style="list-style-type: none"> - Time: First Summer school organized 24-30 June, 2012 Second Summer schools organized 23-29 June 2013 - Scope: we expect scholars from all participants' countries; dominantly from Croatia and Slovenia. International group will be formed from participants from all countries. Working language is English. - First summer school promoted already achieved quality of ComLab established in Slovenia. Second summer school is planned to be principally organized and governed by Croatian mentors in a strict international environment regarding students and teachers.
Cible	Students, Teachers, Trainers, Public event for parents guests
Public	Événement public
Informations de contact	dandroic@phy.hr
Date et lieu	second Summer schools organized 23-29 June 2013 in Labin/Rabac

INFIRO Consortium Annual meeting 2012

Date	27.06.2012
Description	<p>AGENDA:</p> <ol style="list-style-type: none"> 1. Financial issues 2. Web portal 3. Summer school 2012. <p>Representatives from all partners were present at the meeting (attached signed list). Meeting started with short introduction by dr. Androi, followed by plans for Thursday field trip and agenda for tomorrow – mostly dedicated to future of the project, organisation of course materials in the future and course hardware issues. Partners will present progress in their work packages, and projections for the project budget execution will be discussed.</p>
Cible	All partners
Public	Événement non public
Informations de contact	dandroic@phy.hr
Date et lieu	27.-28.06.2012. Rabac, Croatia

Événements

1st International Summer School of Robotics, Electronics and Computerized laboratory

Date 23.06.2012

Description International summer school of robotics, electronics and computerized Laboratory is a planned activity (WP8) of INFIRO Project. Main ideas are explained in the Project proposal. Here we are repeating some crucial milestones:

- Participants: 25-30 young pupils from vocational schools with distinguishing talent related to electrotechnics
- Time: First Summer school we plan to organize in June, 2012
- Scope: we expect dominantly Croatian scholars will be involved but we also expect interest from countries involved in this project, particularly from Slovenia
- First Summer school will be promotion for already achieved quality of ComLab established in Slovenia. After nine months of collaboration activities we shall be at a higher stage of technology transfer, so we are not expecting lack of attractive laboratory courses or materials.

Cible Students, Mentors

Public Événement public

Informations de contact dandroic@phy.hr

Date et lieu Labin/Rabac
June, 24-30 2012

Événements

Première réunion du projet InFiRo

Date 06.01.2012

Description AGENDA

6. January

11:00 to 13:30

1. Short introduction of participants and their institutions.
2. Introducing key-points of the InFiRo project, introduced by P0 & P1.
3. WP1: Financial issues, organisational scheme, contracts with partners, project reports, communication between partners, introduced by P0.

13:30 to 14:30 Lunch

14:30 to 19:30

4. Introduction and plan of activities for WP2, WP3, WP4.

7. January

09:00 to 12:30

5. Introduction and plan of activities for WP5, WP6, WP7, WP8.

12:30 to 13:30 Lunch

13:30 to 17:30

6. Overview of the conclusions, plans for the second meeting.

Abbreviations

WP1: Project management, coordination P0

WP2: Needs analyses, coordination P0

WP3: Course materials on electricity & electronics and robotics, P3

WP4: Laboratory equipment, coordination P1

WP5: Transferring, adopting and developing software, coordination P4

WP6: Testing and evaluation, coordination P5

WP7: Dissemination and valorisation, coordination P0

WP8: International summer school in robotics and electronics, coordination P2

Comments

1. Attending the kick off meeting by at least one representative per partner for total agenda period is obligatory. If some partner cannot send and prepare for the meeting no representative, extra explanation, documentation need to be provided. Partnership meetings are therefore obligatory. Why would EU participate with 75 % of the grant if the involved institution cannot prepare and send one single person.
2. See the agenda and where you find "introduced by Px" or "Introduction and plan of activities for WPx" that means that certain partner is supposed to have presentation. See Agenda and Abbreviations.
3. To check details of the project, see attached proposal.

Cible P0: University of Zagreb, Faculty of Science, Croatia

P1: University of Ljubljana, Faculty of Education, Slovenia

Événements

P2: Srednja škola Mate Blažine, Labin, Croatia (Vocational technical school)

P3: Vocational technical secondary school, Varaždin, Croatia

P4: Karabuk University, Faculty of Technology, Turkey

P5: Association for Education and Sustainable Development, Romania

Événement non public

Darko Androi, P0

Slavko Kocijani, P1

PLACE: University of Ljubljana, Faculty of Education, Slovenia; Gostiše portal,
<http://www.portal-m.si/>

6. January – 7. January 2012

Project Tags

The project belongs to the following group(s):

Best of ADAM (<http://www.adam-europe.eu/adam/thematicgroup/ADAM>)