eSEC Portal as a Tool for Improvement of Security Focused Studies

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ABSTRACT

This article describes progress within a project approved by The Education, Audiovisual and Culture Executive Agency (EACEA) in period from 10/2009 until 10/2012. The EACEA is responsible for the management of certain parts of the EU's programmes in the fields of education, culture and audiovisual. The idea of the eSEC project originated from the social requirement to increase the quality of education in the field of Security. The fault of the current educational systems is common detachment of the taught theory form the real practical requirements. That is the reason why it is necessary to focus more on the way in which the participants of education process can be prepared for the challenges which emerges from the labor market, which competencies are required and how it would be possible to link the educational systems of various institutions most efficiently. Therefore, the aim of our project eSEC is to develop and increase the competencies of students, pedagogues and research personnel working in the field of security, but even the expert public within the EU and the world. To achieve these objectives, an electronic portal eSEC is in process of development.

Keywords

eSEC, Electronic Portal, Education, Security.

INTRODUCTION

The project originated from the social requirement to increase the quality of education in the field of security. Based on experiences from eastern and middle Europe, the fault of the current educational systems is common detachment of the taught theory form the real practical requirements. That is the reason why it is necessary to focus more on the way in which the participants of LLP can be prepared for the challenges which emerges from the labor market, which competencies are required and how it would be possible to link the educational systems of various institutions most efficiently. Therefore, the aim of this project is to develop and increase the competencies of students, pedagogues and research personnel working in the field of security, but even the expert public within the EU.

To achieve the objectives of the project, an electronic portal eSEC is in process of development. This will become a basic tool, which will enable its users efficiently acquire wanted competences. Practical contribution of the eSEC will be creation of an individual study plan supported by the possibility to achieve part of the chosen competences within the exchange programmes of European universities and consequently use the obtain competences in practice. The eSEC will also assess the availability of current grants and studentships consistent with the chosen study plan and all the necessary information will be provided to the users.

Users of the eSEC will be mainly students, pedagogues, academics, and people with an interest in the field of security engineering. Thereby, we create a link between the worlds of students, pedagogues and expert public within the frame of EU.

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PORTAL

The eSEC-portal will consist of ten modules: Competency based creation of the curriculum, Study programmes, Security Journal, Student's Projects, Glossary of Terms, Newsletter, Blogs, Resources, Labor Market and Mobility.

Module Competency based creation of the curriculum. In this module, a user chooses required competences which he / she wishes to acquire for his / her future professional work in the field of security. The module will help him / her to create a study plan, which will include various study programmes, seminars and events at European universities. This module will also provide information about available scholarship programmes or grants useful for realization of the created study plan. It will also propose which materials available on the portal are useful to obtain required knowledge.

Module Study Programmes. Space designed to publish study programmes focused on the problem of security engineering.

Module Security Journal. Space designed to publish articles, studies, presentations and posters.

Module Student's Projects. Space designed to publish final students' works, which will have gained a prominent position in students competitions focused on research and development activities.

Module Glossary of Terms. Elaboration of electronic dictionary of terms, which enables an interactive search of scientific terms, related to the problems of security.

Module Newsletter. Space designed to advertise the memos about the next events and news.

Module Blogs. Reserved space where any user can share own opinions, experiences and knowledge with the other users.

Module Resources. This module will be focused on innovative methods in education supporting creativity and active approach of users to education and trainings in the field of security engineering. It will enable the use of audiovisual presentations form the lectures, excursions, practical workshops or measurements and other sources.

Module Labor Market. The module provides job offers in the field of security engineering within Europe along with the possibility to publish professional CVs of the job applicants in the field of security engineering.

Module Mobility. Information about scholarship programmes of the universities in the European network.

These interfaces will bring qualitative improvement for learning process of students and we suppose more activities to benefit from them in professional and scientific work. Students will have possibility to compare actual questions and problems on other institutions, in scientific and professional environment. Teachers will be able to get feedback from professionals, colleagues and students. Through the e-portal we will increase the employability of the e-portal users by directly linking competencies required by employers with competencies which are available for students on the e-portal and which are not a part of the educational system.

Educational institutions can offer their pedagogical activities to the target group, whereas, the organizations from the commercial sphere will provide the contents for individual modules (documents, articles, blogs, etc.) and concurrently they will have a possibility to obtain and improve their own expert and didactic skills. Users acquire an overview of the study programmes and courses providing specific competences, which can be attended at various European universities, as well as an overview of European scholarships supporting these studies abroad.

Figure 1 shows the first idea of the portal. Figure 2 is the beta version of the portal and present status prepared for testing and Figure 3 presents the logo of eSEC portal and the project. The beta version was used just for the testing. The link of the portal follows Figure 3.
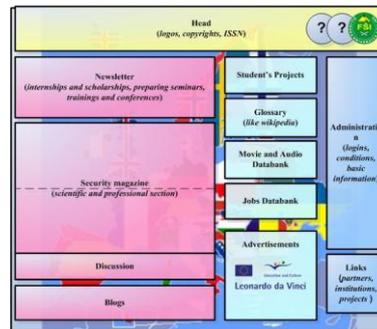
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Figure 1. eSEC Portal Structure, first idea

Figure 2. Beta Version of the eSEC Portal

Figure 3. eSEC Portal Logo

http://www.esecportal.eu/journal/

OUTCOMES AND RESULTS

In the first half of the project the main focus was on receiving best practices in the focused area of portal development and competencies in areas of security. Several documents were prepared by the consortium to prepare the ground for future eSEC portal. In this stage of the project we have several outcomes and results presented next.

European Basic Security and Safety Glossary of Terms includes 500 basic terms in the field of security. The glossary was created under the umbrella of international cooperation within the project Competency Based e-portal of Security and Safety Engineering (www.eESCportal.eu), which is focused on development of European opened internet based system. This system will allow users to access information in several fields of security. Also it will allow connect the world of students, teachers and professionals and extend connections within community in this field. Glossary was made in seven languages (Czech, English, French, Italian, Portuguese, Slovak and Slovenian) and includes terms from these fields of security.

Preparation of the eSEC Best Practices conference in Zlin, 18 March 2010, which brought together 157 participants from 7 countries of Europe (Czech Republic, Poland, Slovakia, Slovenia, Portugal, Ukraine, Russia), see more at http://esec.utb.cz/.

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Papers presented at conferences at:

- the Best Practices conference of eSEC portal project in March 2010,
- the paper at ISCRAM conference 2010 presented the eSEC project beginning in May 2010,
- the International Conference on Computer Simulation in Risk Analysis and Hazard Mitigation, Algarve, Portugal in September 2010,
- Several papers were presented during the conference Policing in Central and Eastern Europe in Slovenia.

From these events we received very good feedback for future development of the portal and contacts for future cooperation.

Participation at several events:

- ITEC - Defense Training and Simulation Conference and Exhibition, London, May 2010,
- Conference Crisis Situations Solutions in Specific Environment, Slovakia, June 2010,
- Conference Open Source Systems for Education, Research and IT 2010, Slovakia, July 2010.

The mentioned Best Practices conference and several workshops (in October 2010 one in Slovakia, Security and safety engineering within defined countries in Europe and two in Portugal one in April 2010 Civil Protection, prevention and society and second one in November 2010 Técnicos de Protecção Civil - Presente e Futuro) were prepared to receive not only the best practices, but also increase discussion for future development of the project and the prepared portal. In this stage it is finalized Glossary of Terms within 12 fields of security, what are also the 12 main fields of the portal:

- Economic Security,
- Energy Security,
- Environmental Security,
- Fire Protection,
- Industrial Security,
- Information Security,
- International Security,
- National Security / Civil Protection,
- Occupational and Health Safety,
- Protection of Persons and Property/ Private Security,
- Public Security,
- Transport infrastructure security.

Very important document which was prepared is the Analysis Study, which includes analyses of environment in individual regions, analyzed by partner organizations of the eSEC project focused on competences required by practice and academic society in the field of security. A part of this material is the analysis of potential eSEC user's structure and their requirements, the analysis of the structure and representation of expected target groups of eSEC portal users: students, pedagogues, scientific employees, experts.

Analysis of requirements for interactivity, user-friendly extremity, graphical surroundings and multimodality of eSEC portal's modules in connection to supposed skills of target groups users in using ICT. The document includes a partial analysis of eSEC portal's modules content based on analysis of required competences and its users´ structure, which defines the need of individual modules focused on thematic fields of security. In the conclusion of this document there are defined basic security and safety competencies within mentioned twelve fields of security according to Best Practices Conference of eSEC, questionnaire of the Analysis Study and formal and informal discussions during project implementation with support of several communication channels.

During the preparation of the portal new journal, "*European Journal of Security and Safety*" (EJSS) was also established http://www.esecportal.eu/journal/ . EJSS is European scientific journal, primary source of peer-reviewed research articles in all fields connected with security and safety. It was established within as part of the eSEC portal, funded by the European Commission. The electronic environment of the journal allows timeliness, easy access, and responsiveness unparalleled among other academic publications. EJSS publishes peer-reviewed research articles, articles, book reviews, news and communications, opinions from researchers and practitioners. European Journal of Security and Safety is a multidisciplinary journal with a broad base readership in all fields of security and safety. The journal Scope is to promote research, theories, practices,

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analysis, design, implementation, and standards of security and safety within all fields. In January 2012 the first call for papers was launched. Figure 4 shows the EJSS on-line environment, within the Open Journal System, which was used to host the journal management system.

Figure 4. eSEC Journal – European Journal of Security and Safety

CONCLUSION

The own contribution of proposed e-portal consists in progress of information knowledge in field of security engineering and in creation of new resources of information for students, teachers and professionals. Practical aspect of this e-portal is in centralization of resources on one place, where it will be possible to have professional discussion, evaluate published articles, promote seminars, conferences, competitions, insert own blogs, publish student works and step by step make new information sources. Users will be able to search actual information about scholarships, internships and possible work places in fields of security and crisis management. Separate contribution of the eSEC portal is also professional specialized glossary in security, safety and crisis management terms, with interactive search.

The eSEC-portal will provide the link between practice, expert community and educational institutions not only within a particular region but it will also link individual countries within the EU, but not only Europe should be covered. For the future we expect also the rest of the world to join with information. Accordingly, the eSEC-portal will become a centralized source of information in the field of security and will ensure a fast reaction to change of competencies of practical work not only for our graduates. Development of the eSEC-portal will contribute to increase participation on lifelong education of people of all age categories by allowing access to information to all registered users regardless the age or social-economical background in accordance with the rules for web application creation with the support of people with specific needs.

Multilateral project eSEC - Competency Based e-portal of Security and Safety Engineering is submitted within the framework of the programme of Erasmus (Modernization of Higher Education) and focuses on supranational cooperation among educational institutions and expert from practice in the field of security in the EU.

The objective of this project and e-portal is development and enhancement of the competencies of our students, pedagogues, researchers, expert public and other participants working in the field of security in the EU. The support of target groups at obtaining their competencies will be achieved directly by providing them with educational sources as well as indirectly by providing information about where and how these competencies can be acquired further. We believe that the eSEC-portal will become established and well known internet portal in security and safety education.

The official opening and launch of the eSEC portal will be held on May, 30, 2012 at the Conference Crisis Situations Solution in Specific Environment, at the University of Žilina, in Žilina, Slovakia.

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REFERENCES

1. Antusak, E. - Kopecky, Z., 2005, Krizový management – mezinarodni aspekty / Crisis Management – International Aspects, Oeconomica, Praha, ISBN 80-245-0952-0.

2. Holla, K., 2007, Dealing with key terms in risk analysis and phenomenon of uncertainty in this process, In: Communications : Scientific Letters of the University of Žilina. Vol. 9, No. 4, pp. 59-61, ISSN 1335-4205.

3. Jasek, R., Benda, R., Vala, V., Sarga, L., 2011, Launching distributed denial of service attacks by network protocol exploitation, Recent Researches in Applied Informatics - Proceedings, AICT'11, pp. 210-216, 2011.

4. Kampova, K., 2011, Foundations of implementation of risk management process within project management, In: Komunikacie. Vol. 13, No. 2 pp. 88-91, ISSN 1335-4205.

5. Kormancová, G.: 2010: Softvérová podpora projektového riadenia / Software Support of Project Management, In. On-line časopis: Manažment v teórii a praxi 1/2010, ročník 6. ISSN 1336-7137; On-line dostupný na : http://casopisy.euke.sk/mtp/clanky/1-2010/mtp1-2010.pdf .

6. Lovecek, T. – Ristvej, J., 2008, Legal Aspects of Information Systems Security in the Slovak Republic and the European Union, In. conference Internet a bezpecnost organizaci, UTB ve Zline, 2008, ISBN 80-7318-393-5.

7. Simak, L. and Ristvej, J., 2009, "The Present Status of Creating the Security System of the Slovak Republic after Entering the European Union", Journal of Homeland Security and Emergency Management: Vol. 6, Iss. 1, Article 20, DOI: 10.2202/1547-7355.1443, Available at: http://www.bepress.com/jhsem/vol6/iss1/20 , ISSN: 1547-7355.

8. Smrcka, L., 2011, Economic harm of promoting photovoltaics, International Journal of Mathematical Models and Methods in Applied Sciences, 5 (4), pp. 813-821, 2011.

9. Spircova, I. – Sulgan, M., 2004, Nove informacne technologie / New infotechnologies, In: conference "Globalizacia a jej socialno- ekonomicke dosledky '04", EDIS - ZU Zilina, 2004, ISBN-80-8070-311-6.

10. Van de Walle, B. et al., 2010, Information Systems for Emergency Management, N.Y.; London : M.E. Sharpe.

11. Velas, A., 2009, Poistovnictvo pre bezpecnostnych manazerov / Insurance for security managers, Zilina: EDIS - vydavatelstvo ZU Zilina, 2009. ISBN 978-80-554-0149-2.

12. Zanicka Holla, K., Moricova, V., 2011, Human Factor Position in Rise and Demonstration of Accidents, In: Komunikacie, Vol. 13, No. 2, pp. 49-52, 2011, ISSN 1335-4205.

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