EA Training 2.0 Newsletter #2 - EA Competence Ontology

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The Project

_Innovative Enterprise Architecture Education and Training Based on Web 2.0 Technologies_ (EA Training 2.0) is a project co-funded by the Lifelong Learning Programme of the European Commission, which aims to fulfil training and educational needs of students and employees in public and private sectors regarding Enterprise Architecture (EA) using innovative problem-based pedagogies and Web 2.0 technologies. The project started in January 2009 and will continue till the end of 2010.

Project Results

The main products of the project will be an innovative, active problem-based learning methodology for EA education and training, EA courses for university students and private and public sector employees, and an Enterprise Architecture competence ontology including a complete specification of skills and knowledge needed by an Enterprise Architect.

Since the EA Training 2.0 approach considers adjusting EA courses to receivers’ skills and attitudes and their knowledge about EA, the courses’ content will be based on EA
Competence Ontology which enables to benefit from connections between modelled concepts (e.g. connections between skills required to develop particular EA competencies).

What is ontology and how it can be used

Ontologies are knowledge representation formalisms for modelling real-world concepts (e.g. objects, features, procedures, etc.) together with their mutual relationships. An ontology-driven approach enables a formal representation of concepts within a particular domain, and in way agreed within the particular community of users. According to that definition the EA Training 2.0 ontology models the domain of Enterprise Architecture knowledge and skills.

The main reason for modelling a specific domain using an ontology is to formalise real-life project entities onto machine-understandable data constructs and to specify interrelationships between the main concepts of the domain. Thus, thanks to construction of the ontology, a consistent way of specifying concepts, their properties and relations between them is going to be achieved. With the definition of the above factors, the ontology contains contextual knowledge of the domain through reasoning and it is available for information reuse.

EA Competence Ontology

Ontology Development

Before developing the EA ontology, relevant literature research has been conducted in relation to appropriate competence frameworks for describing the EA related competences and in relation to identifying the specific skills and knowledge needed for Enterprise Architects. The consortium partners have involved in this process EA professors and professionals from around Europe through the organisation of focus groups. The focus groups were carried out among three main stakeholder groups of EA Training 2.0 beneficiaries, namely university students and academic staff, private sector employees and public servants. The survey among focus groups’ representatives was conducted in four countries: Austria, Germany, Greece and Poland. As the result from the aforementioned activities, three distinct lists of EA competences have been defined, one for each target group (university students, private employees, public servants). This work has been depicted in the format of the EA Competence Ontology.

Ontology Structure

The EA Competence Ontology was constructed with the use of Protégé 3.3.1, a free, open source ontology editor and is illustrated in the picture below. It consists of five main classes: Areas, Competence, Knowledge, Sector and Skills. All five classes are further split into subclasses where each subclass represents a different Sector of stakeholders (Private, Public and Student). Furthermore, the ontology contains information about the different Areas each Sector is involved in, and it forms relations between each Area and its Competences, providing a full overview of the domain.
Figure 1  EA Competence Ontology
The ontology format is useful since it enables to explore different EA skills and knowledge and it is also practical in the sense that it can be easily expanded in the future with other pedagogical concepts, such as learning approaches, tools and methods. The competence ontology will be used in the future activities of the project to design the EA learning methodology and define the appropriate content of EA courses and relevant approaches for particular pilots.

The ontology as well as the deliverable with a complete reference to our research and results are available in the project website: www.eatraining.eu

CONSORTIUM

The consortium consists of 7 organisations from 6 different countries.

| Coordinator: University of Macedonia, Research Committee | Greece |
| Euroconsultants S.A. | Greece |
| University of Koblenz-Landau | Germany |
| Aalborg University | Denmark |
| BOC Asset Management GmbH | Austria |
| “Cities on Internet” Association | Poland |
| National University of Ireland, Galway | Ireland |

PROJECT FACTSHEET

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Innovative Enterprise Architecture Education and Training
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please visit the EA Training 2.0 website at:
www.eatraining.eu

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