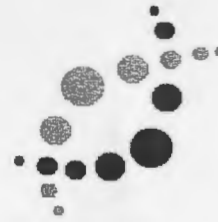


September 29<sup>th</sup> – October 2<sup>nd</sup> 2009  
Nice, Côte d'Azur, France



# EC-TEL 2009

## Synergy of Disciplines

---

---

### AWARD CERTIFICATE

**“Metadata in architecture education - First evaluation results of the MACE system”**

Authored by:

**Martin Wolpers, Martin Memmel, and Alberto Giretti**

**Received the Best Synergy between Disciplines Paper Award**

**(Best Interdisciplinary Paper) at**

**The Fourth European Conference on Technology Enhanced Learning**

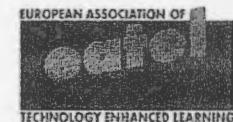
**"Learning in the Synergy of Multiple Disciplines "**

 **Springer**

---

---

**Ulrike Cress - Vania Dimitrova**  
**Conference Programme Chairs**



# Metadata in architecture education - first evaluation results of the MACE system

Martin Wolpers<sup>1</sup>, Martin Memmel<sup>2</sup>, and Alberto Giretti<sup>3</sup>

<sup>1</sup> Fraunhofer Institute for Applied Information Technology, Schloss Birlinghoven, D-53754 Sankt Augustin, Germany [martin.wolpers@fit.fraunhofer.de](mailto:martin.wolpers@fit.fraunhofer.de)

<sup>2</sup> Knowledge Management Department, DFKI GmbH, Trippstadter Str. 122, D-67663 Kaiserslautern, Germany [martin.memmel@dfki.de](mailto:martin.memmel@dfki.de)

<sup>3</sup> Universita Politecnica delle Marche, P.zza Roma 22, I-60121 Ancona, Italy [a.giretti@univpm.it](mailto:a.giretti@univpm.it)

**Abstract.** The paper focuses on the MACE (Metadata for Architectural Contents in Europe) system and its usage in architecture education at the university level. We report on the various extensions made to the system, describe some of the new functionality and give first results on the evaluation of the MACE System. Several universities were involved with significant student groups in the evaluation, so that the indications described here are already highly trustable. First results show that using MACE increases student performance significantly.

## 1 Introduction

Architecture education, specifically in higher education, relies strongly on the paradigm of 'learning by example', meaning here that students use existing entities like buildings and projects, but also other objects as sources of inspiration [1, 2]. Consequently, students need simple and personalized access to vast amounts of architectural information. Access and navigation need new forms of visually based discovery oriented mechanisms for access to the provided learning material [3]. Thus, simple keyword search and result link presentation are not sufficient but need to be extended to, e.g. image and location based search and classification browsing. Such advanced methods of access require rich information about the learning resources.

Many different repositories exist that address aspects of the needs of students in the architecture domain, unfortunately not in a homogeneous way. Instead, educational material is scattered over many repositories like the Dynamo repository<sup>4</sup> providing information about architectural projects or ICONDA<sup>5</sup> providing access to legislative documents important to building construction and design.

Within the European project MACE<sup>6</sup> (Metadata for Architectural Contents in Europe), we enable to search through and find learning resources that are

<sup>4</sup> <http://dynamo.asro.kuleuven.be/dynamovi/>

<sup>5</sup> <http://www.iconda.org/>

<sup>6</sup> <http://www.mace-project.eu>