

Teaching Geodata Acquisition – E-Learning Experiences and Sustainability

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Key words: Geodata acquisition, E-Learning, GIS, WebGIS, Evaluation.

SUMMARY

For successfully running Geographic Information Systems (GIS) the required geodata has to be acquired. For this task different techniques of primary and secondary acquisition methods may be used. The knowledge regarding these techniques and the required basics is valuable not only for geodesists but for all GIS user. Hence these techniques are taught at the Institute for Applications of Geodesy to Engineering (IAGB) University Stuttgart to other courses of studies like technique and management of real estate (in German) and infrastructure planning (in English).

The e-learning project gimolus (GIS- und modellgestützte Lernmodule für umweltorientierte Studiengänge, i.e. learning modules for GIS and modelling in environmental courses) granted by the German ministry for education and research gave the opportunity to create e-learning modules for teaching the basics and the techniques for geodata acquisition in a multidisciplinary way. The achieved main aim of the project was the creation of a internet-based e-learning platform for GIS and model based studies.

The authors will give an outline of gimolus and the subproject “Geodata acquisition and management” (GEM). The techniques like XML, PHP and Flash as well as WebGIS as characteristic of the project are presented briefly. The developed bilingual e-learning modules (English and German) make a world-wide use possible. The XML-structure provides the possibility to enhance the platform to a multilingual system.

Besides the media-didactical concept, that consists of an e-learning portion and an essential part of physical teaching in the classroom is presented and justified. Evaluation results of the lecture “Geodata Acquisition and Management” of the master course “Infrastructure Planning” at the University Stuttgart show the great acceptance of the concept by the students.

One remaining problem of the e-learning platform gimolus is the sustainability especially after completion of the project, because granting is stopped by this date. The technical maintenance of the e-learning system and even more important the questions of up-to-dateness of the teaching content within the system require a high effort of manpower and has to be financed in a way. The authors will present there strategies of sustainability and some experiences to collect fees of possible academic as well as commercial users by introducing life-long learning environments.