Teaching and learning about Geographic Information Science for whole Switzerland - The Swiss Virtual Campus Project GITTA

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ABSTRACT

The Federal Program "Swiss Virtual Campus" (SVC) aims at promoting web-enabled teaching and learning technologies all over Switzerland. The project "GITTA" (Geographic Information Technology Training Alliance) is one among 50 SVC-projects. 10 partner sites are linked together, covering almost 100% of academic institutions providing GIS-education in Switzerland.

Due to the diverse nature of GI there are quite a lot of very different studies that need to educate their students in GIS. Many of them do not have enough capacities to offer courses. GIS-courses are offered at technical colleges (Fachhochschulen), ETHs (Eidgenössische Technische Hochschulen) and universities. They all have different curricula with varying objectives. Thus the GITTA-project comprises of members from each of these institution types.

The aims of GITTA are on one hand to recycle already existing teaching materials for the use via internet-based training facilities and on the other hand the development of new materials focussing on new media technologies. We will also turn our attention to using dynamically created GI-webcontent to provide learners with the most flexible, actual learning content, where this makes sense in terms of our learning objectives.

The existing GI-education shall be supplemented or replaced where appropriate. Time that can be freed will be available for higher valued tutoring and coaching activities.

The GITTA materials are built up following a modular structure (s. Figure 1). Four *levels* (basic, intermediate, advanced and case studies) are subdivided into *modules*. To ensure agreement of all, each of the modules is authored by at minimum two different partner sites. The module "Basic Spatial Analysis" is co-authored by six sites.

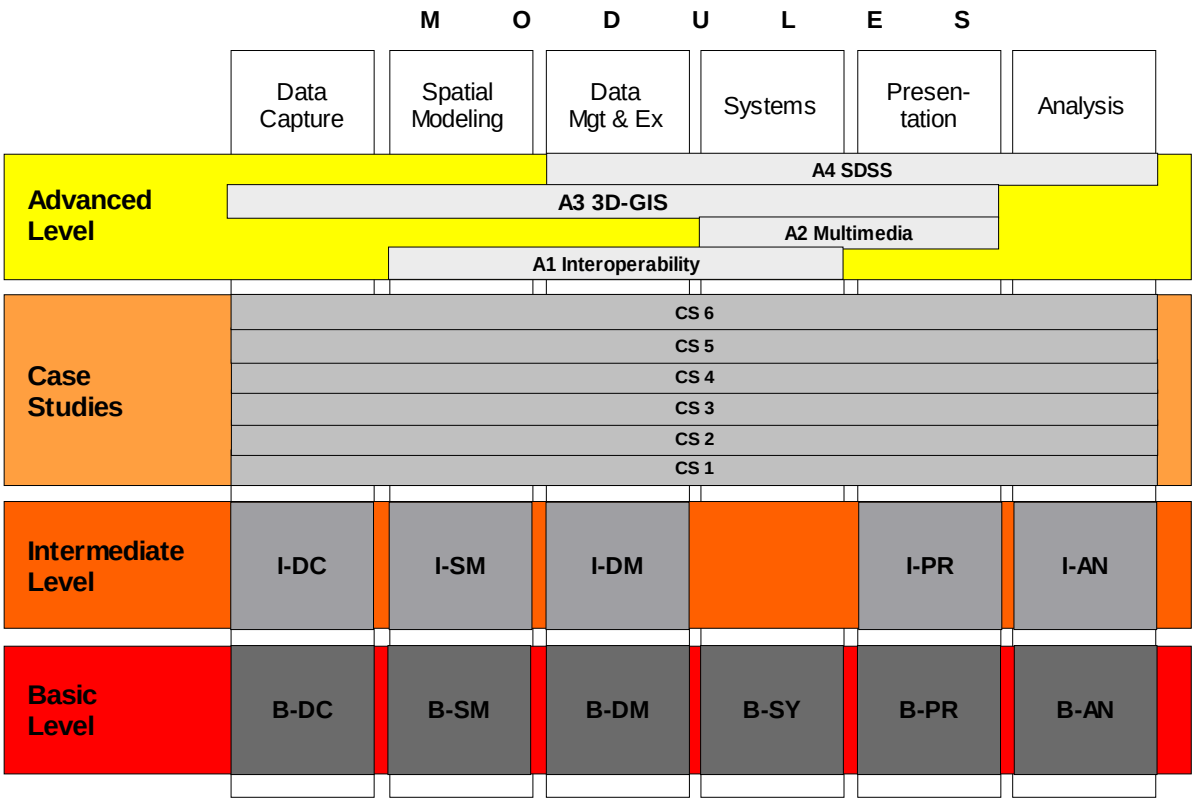

Figure 1: Modular structure of GITTA

The project started with a longer conceptional phase to create stable, reusable and reliable educational and instructional design templates as well as rules for authors and content providers (s. Figure 2). Figure 2 drafts the workflow of the GITTA project.

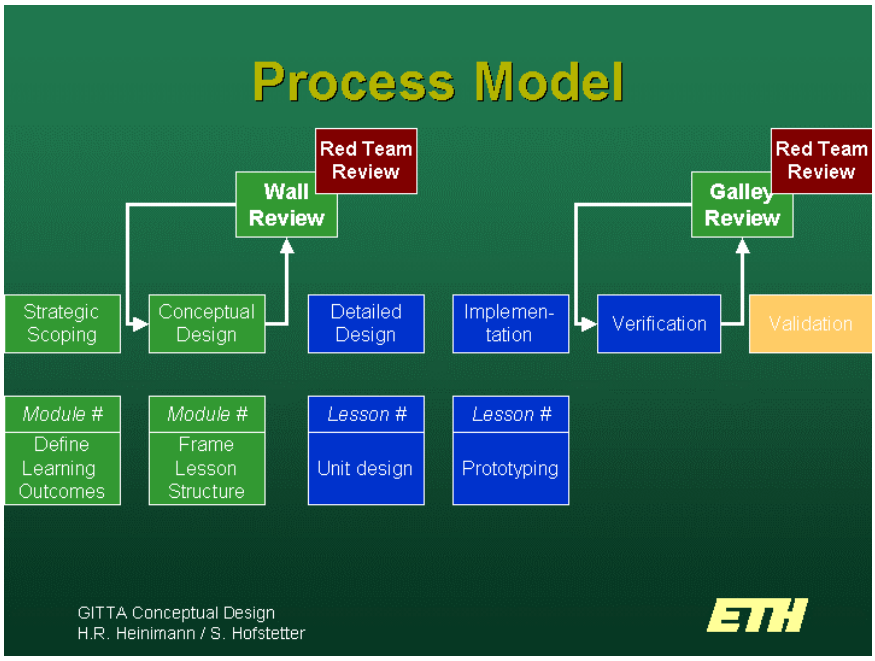

Figure 2: The GITTA process model

From the very beginning the use of XML was unequivocally. So we had to find ways and tools for authors that where technically less skilled. With the help of XML-authoring tools they can produce their content in XML-format without any further need for conversion. The structures and XML-schemas follow international standardisation attempts on e-learning (IMS Global Learning Consortium [1], IEEE Learning Technology Standards Committee (LTSC) P1484 [2], Learning Material Markup Language [3]). The rough structure of the learning materials is shown in figure 3.

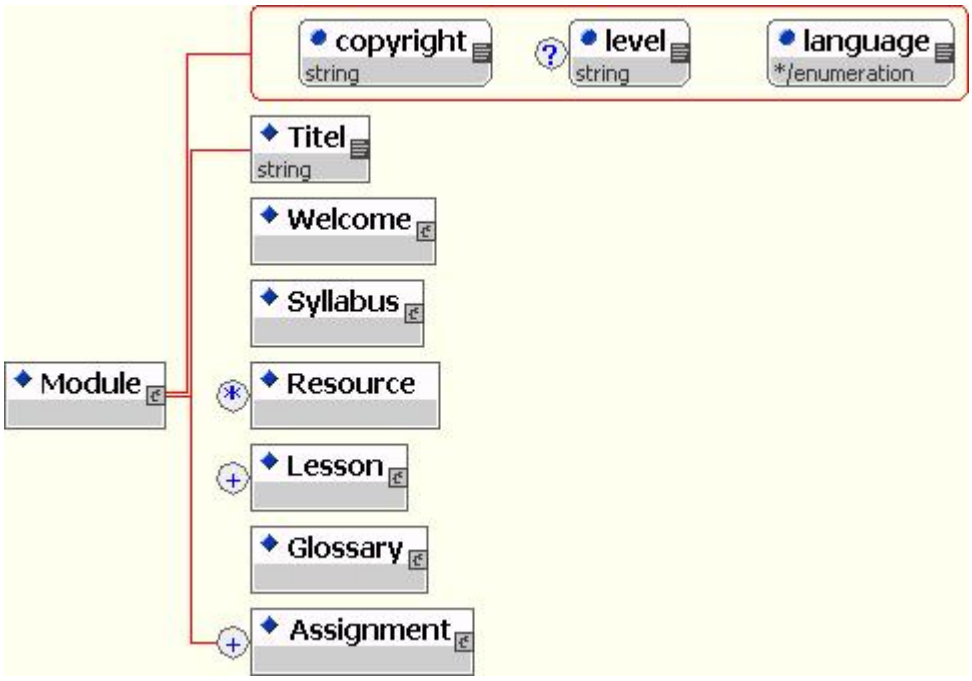

Figure 3: Hierarchical structure of the GITTA learning materials

Among the biggest challenges of the project is the attempt to unify the different curricula.

This presentation is a status report of the GITTA project.

[1] http://www.imsproject.org

[2] http://grouper.ieee.org/groups/ltsc/

[3] http://daisy.fmi.uni-passau.de/projects/PaKMaS/LM2L/