MODULAR TRAINING PRODUCTS

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Abstract *— A modern educational organisatio n has to face many kinds of challanges these days. Even institutes which traditionally have been focusing to degree -oriented education have to be prepared for offering courses to new customer groups. Typical examples of such action are short courses offere d to companies. In some cases this may require quite rapid responses to the customers' needs. On the other hand also the contents of the courses in the 'traditional' field change more often than before, at least the latest information has to be updated re gularely. These things offer a challange to the planning of courses: how to create high quality course materials efficiently.*

Course materials can nowadays consist of very diversified components (i.e. learning objects). That is mainly thanks to new distribution methods such as the internet or CD's.

In our project we have designed and accomplished a method to easily create learning objects –based course materials. The main goals in our project have been the reusability of learning objects and the modu larity of courses: different courses may contain same learning objects and also some larger entireties such as lessons or even modules. With our method it is possible to manage the whole course material hierarchy (a learning object -> lecture -> course -> module).

The 'heart' of our system is a learning object database, which contains the learning objects or links to web sites which are used as learning objects in our courses. If a learning object is a file it is physically imported to the database. When a new learning object is added to the database also metadata is added to better describe the purpose of it. Our metadata describtion is based on a simplified version of IEEE LOM scheme. Creating a course in our system is based on 'jigsaw buzzle' –principl e. Learning objects can be picked from the database and connected to course lessons. The result from the end-users point of view is a simple web site which contains the course scedules, lessons and main materials and learning objects in a nice 'packet'.

Offering courses to different target groups requires a flexible tool for designing and accomplishing optimal material collections to each group. In our project we were not trying to 're -invent the wheel' by creating just another e -learning environment. On the contrary, our tool does not offer all services which are often provided by e -learning environments (discussion groups etc), but is clearly focused on efficient use of learning objects and can thus be used also together with other e-learning environ ments

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Index Terms *—e-learning, learning objects, m aterial distribution .*