

A Framework to Enable Enriched Training Experience

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Abstract:

This document introduces the European, Leonardo-funded project V3 (Versatile Vocational and educational training Vehicle). It describes its goals, presents its status after six months of activity and provides a preview of future work.

1 Introduction to V3

1.1 What is Needed

The European, Leonardo-funded V3 project (Versatile Vocational and educational training Vehicle, <http://v3.euproject.org>) is aimed at designing, implementing, deploying, evaluating and exploiting a versatile, user-friendly, ICT-based Vocational and Educational Training (VET) framework suited for both young people in initial training as well as adult involved in lifelong learning activities.

The need for Europeans to increase their professional skills and employability has been emphasized by the Lisbon European Council in March 2000. This need has been since addressed by a large variety of projects and initiatives and a number of innovative tools for generating training contents have been proposed. However, many of them have not succeeded in establishing a landmark in the long run, due to a lack of versatility and user-friendliness. Trainers often gave up their ambitious initial plans, hence exposing their trainees to incomplete and/or outdated material.

1.2 Building a User-friendly Training Framework

Drawing conclusions from these facts, the ambition of V3 is first to design and implement a versatile, user-friendly training framework requiring a limited investment from the trainer to achieve a performing competence building process with his/her trainees. Seminars presented by the trainer on his/her own computer will be recorded with the help of an open-source, add-on software merging screen and voice activities. Versatility of the content will be achieved through the capture of screen shots, enabling to embed not only slides presentation, but also demonstrations, annotations, etc. Automatic indexing tools will be applied to the resulting audiovisual file, in order to enable searches through a collection of files and to facilitate navigation within each of them.

The audiovisual files, to be compliant with public encoding and indexing standards like MPEG, LOM and SCORM, will be made available through the Learning Management System platform of the trainer's organisation, where a personalised learning process will be organised to the benefit of the trainees, by drawing a pathway across the available modules, taking into account both their formal and informal skills.

2 Current status

2.1 Recording Software

As far as the recording software tool is concerned, the issue of portability has been addressed, leading to the edition of a report describing a technical way to design a portable solution based on SDL (Simple DirectMedia Layer). Simultaneously, there exists an open-source recording software CamStudio, (<http://sourceforge.net/projects/camstudio/>). CamStudio was taken as a base for further development. It has been upgraded to improve its user-friendliness, and combined with XviD codecs to deliver more compact outcomes.

2.2 Indexing

The indexing strategy is the true burden of the project, as one faces the limitations of the proprietary status of file formats. The project is now aiming at gathering two different kinds of meta-data, e.g. file-level meta-data, describing the general content of a recording, and slide-/chunk-level meta-data, to be used later on for enabling the download and/or the streaming of a given chunk of a recording. The use cases depicted in the following figures show the two main options - the recordings may be indexed locally on the lecturer's computer, or later on the server with the help of a keyword database.

2.3 LMS and Interoperability

Finally, as far as the interoperability between an existing LMS and the repository of recordings is concerned, two instances of a repository have been established at two Consortium partners' sites - <http://v3.zmml.uni-bremen.de/v3rc/index.cgi> at ZMML, University of Bremen, Germany, and <http://enligne.info.fundp.ac.be> at FUNDP in Namur, Belgium. The sites are currently modified in order to interconnect with the LMS in a web service fashion.

3 Future Work

3.1 Testing and Validation

Beyond the completion on the technical work packages mentioned in the previous section, the project is now entering the experimental phase. First releases of the outcomes from the three work packages are going to be deployed at the partners' sites in order to be used by trainers and trainees, and their feedback will be collected in order to tune further developments.

3.2 Valorisation

In the second stage, it is the ambition of the V3 project to deploy, evaluate and exploit the implemented training framework within the Consortium to seek for feedback from both trainers and trainees. The prototype implementation of the V3 learning support environment will be tested, evaluated and valorised not just at the Consortium partner institutions working mainly in the field of IT or management but on a larger scope. The courses driven by the environment will not only cover IT-related subjects. The valorisation will encompass the life-long learning activities on software development (both programming and software engineering), project and process management, and also science - statistics including specifically biostatistics. Valorisation partners include public universities, private higher-education schools, and research institutions having specific needs. The core area of valorisation spans beside the Consortium partners (Belgium, Czech Republic, France, Germany, Luxembourg, and Sweden) a large part of the Central and Eastern Europe.

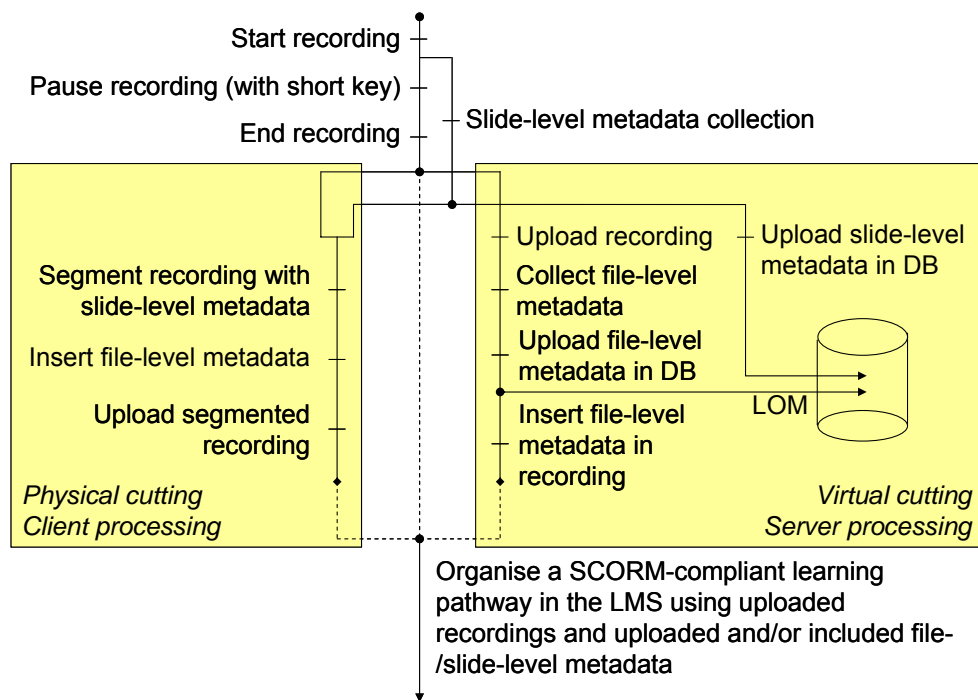


Figure 1. Lecturer Use Case

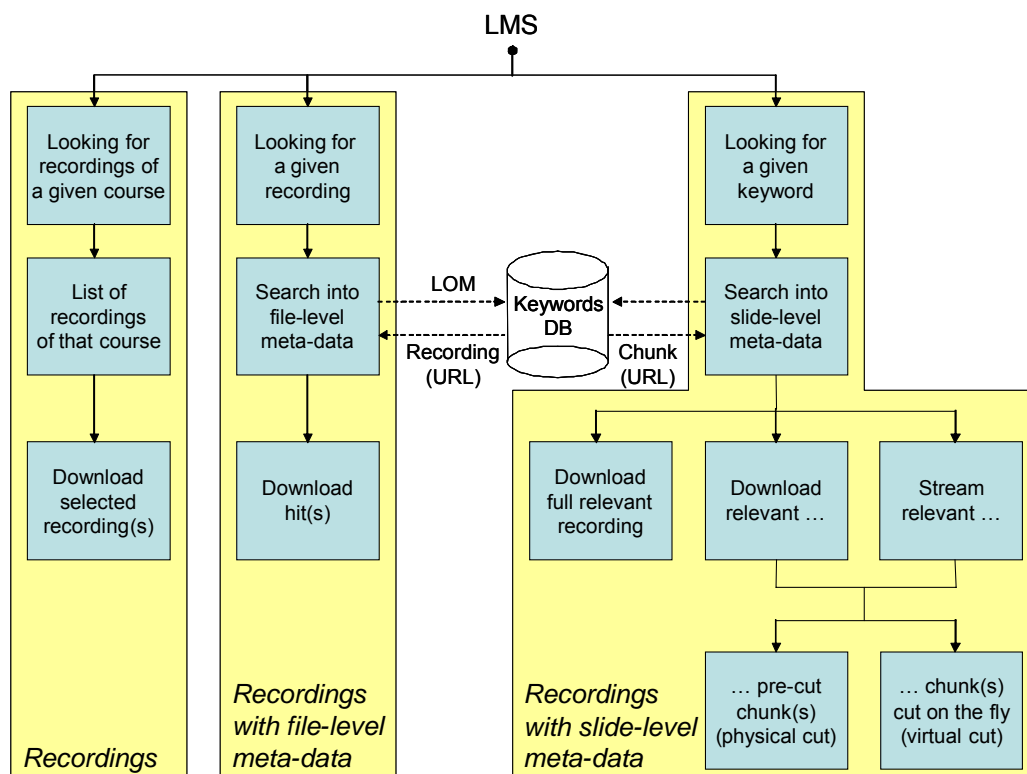


Figure 2. Student Use Case

3.3 Conclusion

Finally, the system will be released to public as a comprehensive, though user-friendly, open-source framework enabling enriched training experience in life-long learning.

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