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ASPECT

A Critical Mass of Content To Which The Common Cartridge Specification Has Been Applied

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eContentplus

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¹ OJ L 79, 24.3.2005, p. 1.



Summary

Deliverable *D5.2 – A Critical Mass of Content (at least 200 SCORM packages in Maths, Science and Technology) To Which The Common Cartridge Specification Has Been Applied* – is a 'status deliverable', the purpose of which is to describe the status of our work with the Common Cartridge specification.

Our work on content packaging has been following several tracks so far. Most of the content providers have been involved in the automatic conversion of existing SCORM packages into Common Cartridge format by means of the converter utility SCORM2CC. Some have also produced new packages in order to get a better understanding of the possibilities of learning resources based on the Common Cartridge specification. Still others have or are in the process of developing ways of producing Common Cartridge packages as part of their standard work flow.



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1 Introduction

Deliverable *D5.2 – A Critical Mass of Content (at least 200 SCORM packages in Maths, Science and Technology) To Which The Common Cartridge Specification Has Been Applied* – is a '**status deliverable**' that presents the status of our work with the Common Cartridge specification.

The deliverable has two slightly different objectives. On the one hand, we have the main objective that focuses on the broader ASPECT work with best practice content packaging specifications: a critical mass of content to which the Common Cartridge specification has been applied. On the other hand, we have a very specific sub-objective that specifies how many SCORM packages we should convert into Common Cartridge packages: in the ASPECT Description of Work, there is the requirement that the Common Cartridge specification should be applied to at least 200 SCORM packages in Maths, Science and Technology.

2 A critical mass of Common Cartridge packages

2.1 The broad figures

At the end of February 2010, the ASPECT LRE portal contains a considerable number of learning resources based on the Common Cartridge specification. The figure is somewhere in the area of 4,200 resources at the moment. Apart from this rather large number of Common Cartridge resources, the various content providers either have or are in process of developing more resources based on the Common Cartridge specification.

2.2 Some details

Most content providers have been involved in the work on content packaging based on the Common Cartridge specification; some on a small, experimental scale to develop a better understanding of the specification; others on a larger and, as it were, production-oriented scale.

2.2.1 The Open University

Although the Common Cartridge resources of the Open University were not developed as part of the ASPECT project, they are a very good example of a large-scale development process where the same content is packed in a number of different formats.

At present there are some 520 large learning resources in the ASPECT LRE that are available as HTML pages as well as SCORM and Common Cartridge packages. The learning resources cover a broad range of areas as described in deliverable D5.1: math, science, technology, modern languages, society, education etc.

These resources are very interesting seen from the point of view of the LRE as a European portal with quality resources. They are, however, due to the problems of language and level, less valuable to our pilots schools.

2.2.2 Educatio

Educatio is another content provider that has done some large-scale packaging of resources based on the Common Cartridge specification. As part of their work in ASPECT they have taken a large number of the objects which they provided to the LRE in the MELT project and re-packaged them so that they are now also available as Common Cartridge packages.

Currently this has been done for some 3688 resources.

In ASPECT, Educatio offers only assets (images, videos, animations) and has decided not to package each individual asset in Common Cartridge format. The intention is to organize the assets in collections and then publish them as Common Cartridge packages.

2.2.3 FWU

FWU is currently re-packaging a large collection of DVD-based learning materials. The original idea was to package the material as SCORM packages. However, after having been



introduced to the Common Cartridge specification in ASPECT, FWU has decided to create a dual packaging, so that the same set of resources is packaged in both formats by means of a script that uses the metadata information of the database.

The basic issues have been resolved and it is just a matter of time before a number of SCORM and CC packages from the FWU will be available through the LRE.

YDP is currently having a programmer look closer at the Common Cartridge specification. By the end of February 2010, YDP expects to have a clear understanding of the specification and will set up a plan for the development of a converter tool that will allow YDP to re-package/convert their own rather complex SCORM packages using the Common Cartridge format.

3 SCORM to Common Cartridge conversion

Within the framework of the project, we have taken this sub-objective to refer primarily to how many SCORM packages we should convert into Common Cartridge packages using the SCORM2CC conversion tool that has been developed by Microsoft and one of our ASPECT partners, Icodeon. The main purpose of the conversion was to test whether the conversion tool would provide an easy migration path from SCORM to Common Cartridge.

The following content providers, who all had a number of SCORM packages before the start of the ASPECT project, have been involved in the conversion:

Content provider	Number	Status
Cambridge University Press	36	All converted, but not in the ASPECT LRE
Educ/KlasCement	6	All converted, but not in the ASPECT LRE
FWU	60	Problems with the conversion due to the structure of the SCORM packages
ITC	49	All converted; will probably be added to the ASPECT LRE within the next couple of days.
Siveco	10	All converted, but not in the ASPECT LRE
UL	83	All converted, but not in the ASPECT LRE
YDP	10	All converted, but not in the ASPECT LRE
Total	254	

The lessons learned from the conversion process are not primarily technical, although we did encounter quite a number of issues, e.g. SCORM packages that did not conform to the specifications, and packages that used functionality not supported by the conversion tool etc. These issues have been described in the WP3 deliverable on content use.

As the conversion tool basically just ‘removes’ SCORM-specific functionality, one needs to consider in which situations the conversion is relevant. If one is interested in ‘migrating’ learning resources from a simple SCORM format that is not really doing much more than IMS content packaging, the conversion tool may provide a simple and sensitive solution. In most cases, however, the conversion is just the first step in a process that includes some authoring of the converted package to add specific functionality.

A final issue that has become clearly visible as part of the conversion is not related to the packaging, but to the metadata application profile. As it turned out, quite a number of content providers have had problems understanding how to use the new functionality of the LRE MAP v.4.0 that allows them to describe several manifestations of a given learning resource.

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This is the main reason why so many of the converted resources have not found their way into the LRE yet.

4 Conclusion

This deliverable presents the status of the work on content packaging a year before the end of the project. At the time of writing, the project has exceeded the target of 200 SCORM to Common Cartridge conversions specified in the project Description of Work

Over the last twelve months of the project we will continue our work exploring the functionalities of various content packaging specifications.

We have in the course of the project so far gained a good understanding of the potential of the Common Cartridge specification and plan to delve deeper into the details of this specification in order to be able to provide well-founded recommendations as to the use of packaging in general and the Common Cartridge specification in particular.

At the recent consortium meeting in Lisbon it was decided that all content providers should take their very best example of a learning resource and package it. This will give WP6 a better selection of packages on which to base the pilot tests; it will also, hopefully, give us some excellent demonstrators that can be used for dissemination purposes and workshops; and last but not least it will give all content providers a good understanding of the issues involved in packaging and re-packaging resources.