<subtitle>
e-Portfolios
</subtitle>

### CAPDM Ltd.

## Introduction

There is plenty of talk about portfolios and many conference papers on them, with lots of tools to support their creation. These seem to fall into a small number of offerings:

- CV building and job application preparation;
- Tools offering a glorified file store for Word files, graphics, etc.
- Things we couldn't really see value in.

# So what is an e-portfolio?

It is worthwhile trying to pin down what e-portfolios are. The Wikipedia definition reads:

> "an e-portfolio or digital portfolio, is a collection of electronic evidence assembled and managed by a user, usually on the Web. Such electronic evidence may include inputted text, electronic files, images, multimedia, blog entries, and hyperlinks. E-portfolios are both demonstrations of the user's abilities and platforms for self-expression, and, if they are online, they can be maintained dynamically over time. Some e-portfolio applications permit varying degrees of audience access, so the same portfolio might be used for multiple purposes."

Everyone may have a different definition of what an e-portfolio might be, so it is actually quite difficult to find a hard and fast definition for them. Their use and purpose depends on the context and aims of their use, but there is some commonality emerging as to what they might be. For example, they are created by learners so they can include simple reflective inputs (which is probably the dominant form taken), or they may be wide and varied collection of digital objects expressing views and learning experiences and student achievements.

Though there are a reasonable number of commercial tools now available, there is still little consensus on the **processes** that learners may be involved in when building portfolios. If we were to be unkind we might suggest that many of these tools are but glorified file stores. Surely there must be some more 'learning orientation' to e-portfolios?

CAPDM is keen to be involved in the development of e-portfolios, but we need a better understanding of how learners may use them. We are not alone in this respect. What does interest us though, is more than their use -- it is also about how best e-portfolios can be **embedded** within courses and the course materials.

As a company immersed in semantic mark-up this means that we have to be able to present simple mechanisms to the content developers to allow meaningful portfolio input points to be freely included. The mark-up utilised for this purpose must be simple enough to be used, but the interpretation in the delivery environment must be powerful, engaging and meaningful.

The effectiveness of e-portfolios will depend to an extent on the subjects that they are being used to support. It's hard to see how they might be effective in highly analytical subjects such as Accounting, but they could be extremely effective in subjects where observations are important. Fortunately CAPDM develops courses in Fitness and Exercise (see Kilgore Academy). These courses offer great opportunity to include and experiment with e-portfolios in a way that absolutely supports learning and the overall student experience.

These courses have a large number of videos, for example, used to demonstrate right and wrong technique, how to make coaching inclusive for all, and to explain the very technical detail. With this type of material it is valuable to have students **reflect** on what they see as they are learning. At the end of the course, if the aims of the course have been successfully met, their powers of observation should be greatly enhanced, and able to be compared – through the details in the personal portfolios - against their initial thoughts.

Tutors, who share the student portfolios, can also follow the learning experience of the students and can intervene with additional support where necessary.

If it is difficult to define an e-portfolio then where do we start with an implementation?

CAPDM has taken a lead from a very simple process that we have all been engaged in – building a workbook. In the case of online delivery of learning this will take the form of a **digital workbook**, but it should contain all of the standard input forms that we might use in a paper-based workbook. It should hold free thought (text), images and files (which might have been snippets pasted into our conventional workbook) and it should record more structured inputs such as ticking boxes, answering questions, selecting options and even using coloured pens to highlight points.

These inputs should be included wherever they are needed in the learning materials and they should be easy and obvious in their application. Inputs are only of use if they are usable. In our case they build up into a Digital Work Book (DWB) which the student can access at any point over the web, or print as an electronic (PDF) booklet - see Figure 1.

Where to start?

## CAPDM Ltd.



Figure 1: A digital workbook available online during study and as a printable PDF booklet to take away

Integration and Semantic Mark-up

e-Portfolios are an integrated part of course development and production. It would be very time consuming to continually build parallel e-portfolio structures, web pages, forms and summaries for every course that chooses to include the underlying features.

In semantic developments these input points are very simple XML tags, but they can be automatically interpreted as rich, interactive structures in the webbased course materials (or as conventional input points in the print and PDF equivalents), capable of supporting interaction and persistence.

The value of semantic mark-up is obvious here. Simple tags can be interpreted in a very rich functional form. All of the supporting structure and summary information is auto-extracted from the source XML irrespective of the interpretation, and this can be used directly in the dynamic generation of the DWB itself.

The restrictions - and there are always restrictions - lie with the range of interaction that can be devised and with the implementation flexibility of the underlying learning environment. Moodle for example, offers extreme flexibility; commercial offerings are less accommodating. The presentation of learning materials with portfolio input points may be guite generic (HTML) but the underlying support is specific to the platform.

However there is no lack of flexibility in our approach. New portfolio elements can be readily added and interpreted, and existing mechanisms can be extended, reinterpreted or even changed. Perhaps most importantly their use is entirely driven by the content of the learning materials and their needs - and it is completely generic. This is in stark contrast to the use of a bolt-on system that has no course-specific (or course materials) integration, no inherent flexibility and no obvious correlation with the learning.

For CAPDM e-portfolios are a collection of electronic evidence assembled and managed by a user, usually on the Web. Our initial application is to ensure that their use, primarily as support for reflection, is simple and engaging and summarised in a usable format. They are used to make explicit the transitions in student learning and understanding as they progress through a course as a demonstration of the user's abilities. They support specific beliefs, but they also support self-expression, and they can be maintained dynamically over time. Finally the same portfolio is used for the student's own needs, but they are shared with the tutor who is then able to see the progress made by the student as the course is studied. In this respect they are multi-purpose. This element of the Wikipedia definition has been a goal of ours.

Our early work allows portfolio input points to be readily embedded in learning materials, so the portfolio is highly integrated into the courses that use this feature. The mechanisms for including and using, portfolios are as simple as the conventional workbook activities that we are mimicking. The presentation and portability of the portfolio itself is engaging and attractive.

If you would like to see samples of this work, at to take part in future collaborative work, then please contact us at enquiries@capdm.com to discuss details.

Visit <a href="http://www.capdm.com/resources">http://www.capdm.com/resources</a> for more CAPDM briefing papers.



## CAPDM Ltd.

22 Forth Street Edinburgh EH1 3LH United Kingdom

Copyright © CAPDM Ltd. All Rights Reserved

capdm.com enquiries@capdm.com +44 (0) 131 477 8630 @capdmltd

# Conclusion