

A MODEL FOR MAINTAINING INTEROPERABILITY OF COARSE XML SHARABLE LEARNING OBJECTS AFTER RE-AUTHORING IN A STANDARDS-BASED EDITOR

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ABSTRACT

Learning Objects are being packaged for interoperability using internationally agreed standards such as the Sharable Content Object Reference Model (SCORM). A course designer aggregating heterogeneously created Sharable Learning Objects (SLOs) from a repository when challenged with coarse SLOs would find a standards-based editor to be a useful tool for re-authoring if the interoperability of an edited coarse SLO could remain intact after the edits. Further, since many authoring applications are beginning to use XML to define SLOs (XSLOs) it is inevitable that a repository will contain (solely) heterogeneously authored XSLOs and as a result, we focused our research on maintaining the interoperability of re-authored coarse XSLOs. This paper presents research conducted to determine if a coarse XSLO could be edited in a standards-based editor without affecting its interoperability. Initially a model for the XSLO was developed and titled *SIM*. We found that if the *SIM* is applied during the authoring process, it will afford protection to the interoperability of the XSLO when the XSLO is subsequently edited in a corresponding *SIM*-aware DOM editor. We describe how a DOM editor (based on the Document Object Model) can be transformed into a *SIM*-aware DOM editor such that it is still standards-based. In addition, we present the application *eLearnPro*, which was developed to test the interoperability of XSLOs that were authored using the *SIM*, then re-authored by a *SIM*-aware DOM editor.