

# A Framework for Bridging Content and Records Management Systems

## - A Lightweight System for Automated Records Submission and Metadata Exchange

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### 1. Introduction

Content Management Systems (CMSs) are widely used for organizations to publish information, to keep transactions and records, and so on. By this wide acceptance of electronic documents and records, organizations are facing demands for the safe archiving of electronic records in their repositories. However, in general, CMSs in use today do not offer the required level of functionality for an organization that has a responsibility to maintain its records. It therefore becomes necessary to transfer the records to be retained to a Records Management System (RMS).

CMSs and RMSs are seldom interoperable out of the box, making archiving of retained records difficult. There are many reasons for this interoperability problem: Differences in the used metadata schemes, lack of metadata conversion and incompatible export/import processes. Up to now, the solution to these problems has been to add records to the archive by hand, or to create custom programs for records transfer, made to match the existing software and hardware profile. Neither of the above solutions is optimal. In this paper, the author proposes a lightweight approach to solve the problem by integrating Content Management and Records Management software. [1][2][3]

### 2. Three layered model and ATLAS

The proposed approach is based on a three layered model for the organization of a corporate records management system. The model allows the connection of one or more CMSs to a RMS by making it possible to automatically transfer and ingest retained records for archival. [4]

Using the three layered model, the author has developed ATLAS (Automated Transfer Lightweight Archive System). ATLAS is designed to connect multiple CMSs with different metadata schemes to a single records repository, enabling automatic archiving of records submitted by users. Each CMS is registered in ATLAS, along with a metadata crosswalk that translates CMS metadata into a metadata format that can be imported into the RMS. This means that a CMS metadata element that has an equivalent element in the RMS metadata scheme is automatically reused. [5]

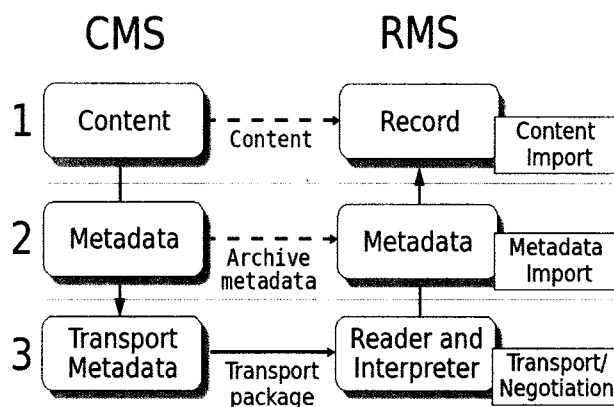


Figure 1: Three layered model

ATLAS also supports registration of additional CMSs by allowing administrators to upload metadata crosswalks in XML/OWL. The XML/OWL was chosen because it provides organizations with a common vocabulary for metadata terms, including the relationship between these terms. This makes searching the crosswalks easier, since the location of the terms and their interrelationship is defined in the ontology. [6][7]

ATLAS uses RSS 2.0 as the main protocol for transferring records and metadata, but has support for other protocols, such as ATOM. Because it uses open protocols and technologies, for example RSS and XML, ATLAS is designed to work with existing organizational CMSs and a RMS. It also makes it possible for organizations to use existing tools to expand the functionality of ATLAS by adding support for technologies such as authorization and Trackback. [8]

### 3. Concluding remarks

With this paper the author hopes to have shown that the cost of records submission in an organizational setting can be significantly reduced by using the three layered model, exemplified by ATLAS. The fact that the three layered model doesn't require reprogramming of the existing CMSs or RMSs, coupled with the fact that it is not tied to any one software solution, makes it easy to implement in an organizations existing content management environment. [9][10]

The ATLAS archiving system constructed for this research was able to transfer content and metadata successfully from

a CMS to a records repository built on Dspace. The CMS used in this study was slightly customized in order to be adjusted to the three layered model.

The ATLAS solution was shown to be significantly less costly than a manual export/import process. ATLAS also proved to be more flexible than a solution based on CMS specific plug-ins or ad-hoc export/import scripts. [11]

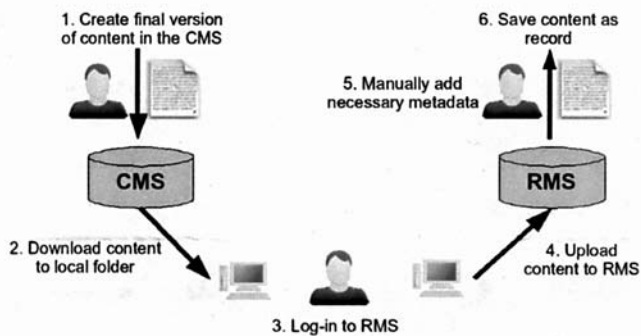


Figure 2: Manual export/import process

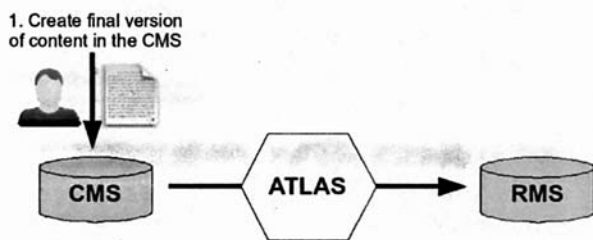


Figure 3: Automated process using ATLAS

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