

# A DRUPAL CMS MODULE FOR MANAGING MUSEUM COLLECTIONS

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## ABSTRACT

Digitization efforts and web presentations are currently on-going in many museums, archives, libraries and culture heritage institutions in general, exploiting the advent of WWW and digitization technologies. The main benefits from these efforts are exhibit cataloguing, their effective management, preservation and showcasing, and their presentation to the public through the WWW. Numerous research outcomes and commercial products aim at supporting the digitization efforts and maximize benefit delivery. However, many museums, especially the smaller ones, cannot afford a commercial product and resort to using simple static web pages for their web presence and exhibit presentation.

Content Management Systems (CMS), especially open-source ones which come with practically zero-cost, are more and more frequently adopted by museums to create and maintain their website, since they simplify the creation and editing of the web pages and may be used by non-computer experts; the Indianapolis Museum of Art (<http://www.imamuseum.org/>) and the Amon Carter Museum (<http://www.cartermuseum.org/>) sites are examples of open-source CMS-based museum sites. Using however a generic CMS has the drawback that it lacks the specialized organization of information (e.g. fields for CIDOC [[http://cidoc.ics.forth.gr/docs/cidoc\\_crm\\_version\\_4.2.2.pdf](http://cidoc.ics.forth.gr/docs/cidoc_crm_version_4.2.2.pdf)] and Dublin Core [<http://dublincore.org/documents/dces/>] metadata), as well as the specific functionality needed by museums (e.g. multilinguality, tailored content for different visitor categories [profiles], image watermarking for IPR protection etc). To this end, in the context of a joint project (funded by the Information Society Operational Program, Action 2.4, Call 91), targeting the collection, documentation and digitization of the Anthropology and Criminology Museums of the Athens University, an extension to the Drupal (<http://drupal.org/>) open source CMS has been designed and implemented in the form of an add-on module. The module supports the creation, editing and management of multilingual and multi-profile museum exhibits and collections content, and its functionality is described below.

(1) *Database schema extension* with appropriate elements allowing structured storage and processing of data describing *exhibits*, covering international standards such as Dublin Core or CIDOC, as well as additional items, e.g. information related to exhibit maintenance, and *exhibit collections* (names, descriptions, images, member exhibits, sub-collections etc). The extended database schema also caters for web visitor profile and available languages specification, and the ability to store tailored content for each profile and language. Multiple membership of exhibits to collections is allowed, permitting curators to tailor the museum message that the presentation of the particular exhibit communicates.

(2) *Digital exhibit representation (DER) management*. DERs (2D pictures, 3D models, videos etc) are not simply multimedia objects linked or embedded in the text, but are dynamically retrieved, organized and presented. Moreover, the permission scheme pertaining to DER access has been extended to provide fine-grained control (access to each distinct DER may be specified separately, as opposed to the standard Drupal scheme, where access to an exhibit implies access to all associated DERs). Multiple resolutions can be automatically created upon DER import to be used for various purposes (preservation [original, very high resolution] accessible to museum personnel and authorized researchers; low and medium resolutions for web presentation; and thumbnails for quick preview). DERs are dynamically watermarked when presented through the web, to protect museum IPRs.

(3) *Provision of administration pages* through which the museum personnel may enter and manage this information. Access rights to specific administration pages may be assigned to specific personnel members or member groups through the standard Drupal permissions scheme.

(4) *Batch data import/export*, to facilitate information exchange with other museums.

The web sites for the two museums have already been setup and populated, and are accessible at the addresses <http://www.anthropology-museum.uoa.gr/> and <http://www.criminology-museum.uoa.gr/>.