

# Managing OA Multimedia Multi-type Digital Documents in the OpenDLib Digital Library Management System

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## Abstract

In self-publishing philosophy, authors provide access to their works by depositing them into an OA archive. Before being “published”, documents may be reviewed and edited within a process where authors, reviewers and library administrators interact. At the start of this process, authors must upload a copy of their work. It is very important that the self-publishing service allows authors to easily deposit their documents however complex they are.

This paper describes the OpenDLib service for self-publishing. OpenDLib is a Digital Library Service System that allows the publishing, maintenance and dissemination of documents that conform to the DoMDL document model to represent multi-edition, structured, multimedia documents that can be disseminated in multiple manifestation formats.

After briefly presenting the DoMDL Model, the functions for submitting documents by the authors and for managing the publishing process by reviewers (if requested) and administrators are described with some details.

## 1. Introduction

Nowadays organizations of very different nature— whether academic, industrial, commercial or public ones - are becoming more and more interested in constructing institutional repositories. It is expected that by federating the information published by these repositories a wide comprehensive information source accessible to the interested community at any time and anywhere can be created. In this way, people might operate on this common source by exploiting services that allow them to retrieve, access, transform and produce new information that, in turn, can be disseminated to the others, thus giving rise to a process of continuous knowledge enrichment.

Until now, however, this high potentiality of the institutional repositories has been exploited only to a very low extent. New functionality must be made available to fully support their content that is already going to become of very different nature. In fact, most activities are already producing documents composed of different parts in different formats: lessons/seminars with talks and slide presentations, tables and graphics, videos reproducing experiments, surgical operations or new products and the like. Any single component of these multimedia documents may require great intellectual and technical effort for its design and realization as well as large memory resources for its storing, so it is very important that they can be managed by functionalities that allows people to easily create them, make them searchable through specific metadata and reusable for different purposes in different forms. The OpenDLib system [1,2] makes such functions available by providing services able to support a very rich and powerful document model: the *Document Model for Digital Library* (DoMDL) [3,4]. After briefly presenting the DoMDL Model (Section 2), the functions for submitting documents by the authors and for managing the publishing process by reviewers (if requested) and administrators are described (Section 3). Final remarks regard additional advanced functions offered by OpenDLib by exploiting the DoMDL model (Section 4).

## 2 The Document Model for Digital Library

In OpenDLib, DoMDL plays the role of the logical document<sup>1</sup> model that is shared by all the services that implement the functionality of a digital library (DL). DoMDL can represent structured, multi-editions and multimedia documents that can be disseminated in multiple manifestation formats. As sketched in Figure 1, documents submitted by the authors, or harvested from different sources, are logically represented and known to all the OpenDLib services as DoMDL documents, although they may be of very different type and format. At the same time, DoMDL documents can be perceived by the DL users under different views. For example, DoMDL can be used to represent a lecture as the composition of the teacher presentation together with the slides and the summary of the talk transcript; this lecture could be disseminated as the MPEG3 format of a video or as the SMIL document synchronizing all parts of the lecture.

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<sup>1</sup> Throughout this text, the term “document” is used to mean “multimedia digital object”