

Provide, obtain and exchange information: the e-publishing technology information platform CARPET

Scientific communication has been radically changed by electronic publishing (e-publishing) technology. Today, knowledge travels the globe at enormous speed and is accessible everywhere. The success of e-publishing is the result of many projects or individual endeavours which have developed technical solutions for publishing tasks. The software is mostly released under an Open Source licence and the re-use of existing tools and services is often the most effective way for institutions looking to set up an e-publishing system. But information on e-publishing tools and services is often hard to get or tends not to get passed on. In order to fill this gap, the CARPET platform provides information on e-publishing technology and supports the sustainability of existing e-publishing projects and their solutions.

Introduction

The digital distribution of publications over the World Wide Web has come far, and the impact on scientific publishing and research is substantial. Distribution of research or knowledge has become easy, fast and global, facilitating immediate uptake by scientists all over the world. The rising usage of electronic publishing (e-publishing) strategies and technologies has led to global research based on a network of scholarly communication. Besides the development of technological infrastructures, publishing strategies such as open access (OA) are now established as a conceptual dimension of e-publishing. Altogether, e-publishing¹ has changed scientific publishing in a crucial way.²

E-publishing technology itself has therefore developed rapidly in the past two decades to provide fast-paced knowledge transfer. But the technological solutions for e-publishing processes have been developed in very different institutions or as a result of a number of different projects using a great variety of approaches. The results, though very effective in implementing the different stages of the e-publishing process, are therefore also very varied. Over time, the sheer number of independent solutions available has created a fragmented picture of the e-publishing landscape.

The necessity of subsequent use and re-use

There are many reasons for this variety. For instance, individual requirements or existing institutional systems make it necessary to develop tailored solutions. Or institutional boundaries push the institutions to decide on their own approach. But often the reason is the lack of knowledge of existing alternatives or other e-publishing projects that drives institutions to develop their own solution instead of reusing an existing one.

Admittedly, it is hard to keep track of all existing solutions, particularly smaller developments like small code adjustments, add-ons or application programming interfaces (APIs) that have been developed in small projects or by the individual work of



FELIX SCHÜLE
Max Planck Digital
Library
CARPET Project

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306 librarians. These smaller products are of huge importance, because small customizing jobs are the main task for in-house developers in institutions like libraries. What generally happens is that projects come to an end and the staff who worked on them move on to other projects, jobs and institutions. Their developments can become hard to find and the code may not be maintained. More complex developments can be transferred into commercial business models, but Open Source is often the only viable solution for smaller developments. However, a sustainable Open Source business model also needs a stable user community, as under a commercial licence. So whatever the business model, in order to gain usage and users, the results of their work need to be presented to the community.

For libraries and other institutions, the re-use of existing developments is the most efficient way of setting up an environment for electronic publishing. An existing software solution from one institution can often be easily adapted by others. Even if the software code needs certain adjustments, it is more efficient to work with the available code (and with the aid of some code documentation or the support of the original developers and other users) rather than starting from the beginning. This particularly applies to smaller institutions that may not have the IT resources or knowledge for in-house developments, in which case re-use is necessary. Alternatively, e-publishing functionalities can be outsourced to a partner institution or an external service provider. But to find suitable software or services, libraries and other institutions need information on existing solutions and e-publishing projects.

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In fact, there are two needs that complement each other: on the one hand, there are the developers, providers and those working on e-publishing projects who need to increase awareness of their work via marketing, presentations, and so on, in order to achieve usage (and reusage) of their solutions and services. On the other hand, libraries and other institutions face the problem of redundant and therefore inefficient developments, so they need information on present solutions. The approach of the ‘Community for Academic Reviewing, Publishing and Editorial Technology’, the CARPET Project³, is to establish a platform that both sides can use for their own benefit, to provide, obtain and exchange information.

Sustainability through information

The road that led to the CARPET Project started with a workshop in 2006, led by the German Research Foundation (DFG)⁴ in co-operation with the working group of the German Initiative for Network Information (DINI)⁵, E-Pub. The workshop and a following survey demonstrated a lack of knowledge caused by insufficient communication between the e-publishing stakeholders. At the same time, institutions setting out to establish their own e-publishing environment pointed out the difficulty in getting information on the existing software, services and projects.

Recognizing the problem of sustainability and redundant developments in the German e-publishing field, the CARPET Project was initiated in 2008. The Project is funded by the DFG and is a collaboration between the Humboldt Universität zu Berlin, the Göttingen State and University Library and the Max Planck Digital Library.

The CARPET information platform went online in 2009 and is aimed at librarians and IT specialists, in their capacity as advisors of publication systems or repositories, and others interested in the technical realization of the e-publishing agenda. For this group, it is a place for a quick look or a place to start the evaluation process for e-publishing software or services. Via the platform, they can get in touch with developers or other users and ask questions of a professional audience. Equally, CARPET is aimed at developers, providers and those working on e-publishing projects who are interested in presenting their work or are looking for an infrastructure to support the needs of their users. This group uses the

307 platform to contact potential users of their software or service and to provide a support infrastructure for current users.

The CARPET platform

The CARPET information platform has four main components:

- catalogue
- forum
- knowledge base
- news blog.

The most important of these is the catalogue for e-publishing software and services. Taking all the components together, the CARPET platform is a complete and fully operable information infrastructure on e-publishing technology.

Catalogue

The catalogue for e-publishing software and services covers the whole range of the e-publishing process, including creation, submission, approval, archiving and access of digital objects (see Figure 1). All-in-one software solutions are presented, as well as small tools which can be used for additional or specific tasks. An Open Source licence is not mandatory to enter software in the catalogue; commercial licences are accepted as well, in order to present the whole range of software. Service providers for e-publishing processes are also listed in the catalogue in case it is not in the interests of the institution to operate the service themselves, or they are not able to operate it.

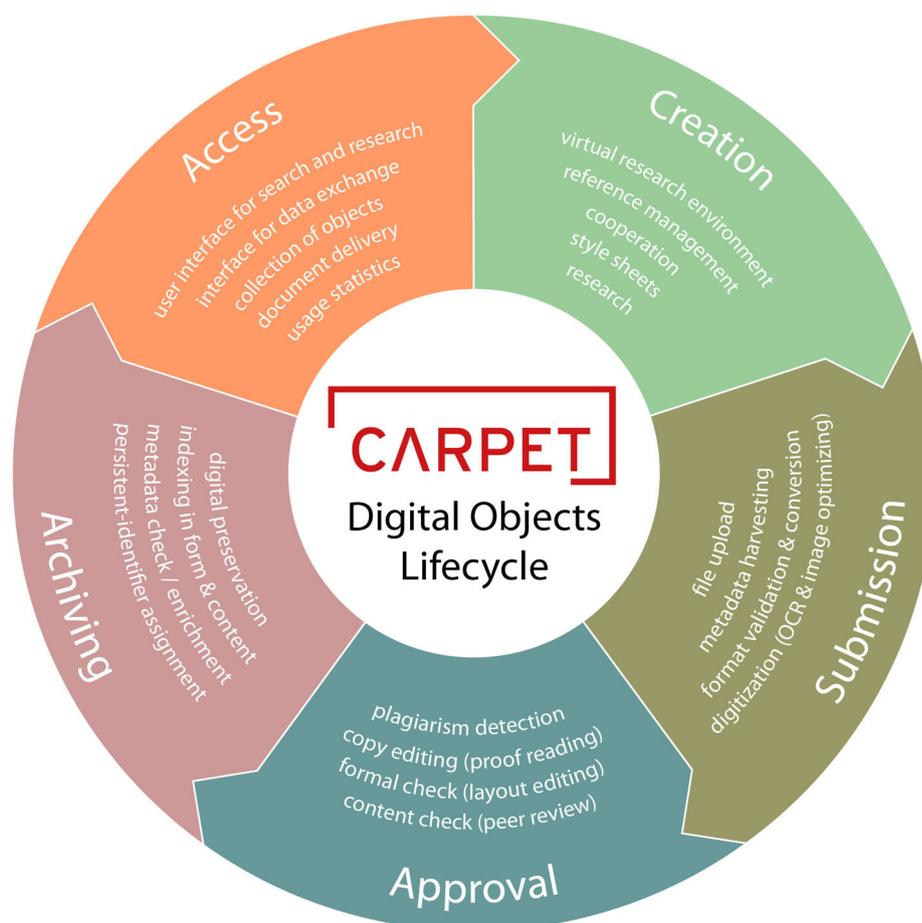


Figure 1. The CARPET Digital Objects Lifecycle

308 For ease of comparison, the data set of a particular software tool or service contains detailed but basic information. The catalogue should be visited at the start of an evaluation process to get an overview of available software tools and services. In case more detailed information is required, links to the information or download page and contact details are provided. The catalogue database is searchable by several categories, for instance: scope of the e-publishing process, type of digital objects, supported languages, programming languages or operating system. Additional descriptions denote the function or architecture. The actual software is not downloadable from the platform servers.

CARPET also provides a list of e-publishing projects in order to present an overview of the institutions that are active in the e-publishing community. Therefore it is mandatory to connect an entry in the catalogue with the relevant e-publishing project, institution or company. The technical infrastructure of the catalogue database also enables re-use or alternative/further use, for example the database infrastructure could be used for other lists or catalogues by adding categories or changing category names. Since 2011, the platform has hosted a registry of virtual research environment projects, in co-operation with the working group VForum of DINI.⁶

Forum

The CARPET forum is the communication channel for the platform, where users and developers can discuss general and more technical topics. Providers, developers and researchers working on projects can create a software- or service-specific forum as support infrastructure. Many providers and developers still underestimate the advantages of a support forum over a support mailing list: a forum is an efficient and sustainable method of user support, easy to search and better recognizable for the web crawlers of search engines. The dialogues between developers and users or amongst users themselves are archived in the forum for an extended period of time, complementing a support strategy with documentation and/or FAQs.

CARPET currently hosts support forums for LOCKSS⁷ (digital preservation management), Open Access Statistik⁸ (usage statistics for open access repositories), Goobi Community Edition⁹ (retro-digitization workflow management) and the official German support forum for Open Journal Systems, Open Conference Systems, Open Monograph Press and Open Harvester Systems of the Public Knowledge Project¹⁰ (e-journal system, conference management, monograph publishing, metadata indexing).

Knowledge base

The CARPET knowledge base (KB) was set up to provide information on the platform, not only on tools and services but also on the processes of e-publishing. The wiki-based KB is a collaborative collection of basic knowledge on e-publishing processes at a central location and is open for everyone with an interest in e-publishing solutions to participate in the documentation from basic information to technical implementation of e-publishing. Developers and providers are welcome to set up their own documentation for their project or software product.

News blog

The CARPET news blog started as an open news source about developments in the e-publishing technology field and is also a collaborative area where developers, providers or project teams can present their newest developments, recent updates, upcoming events or anything else they would like to report to the community. Users of e-publishing technology can contribute articles about ongoing discussions, their own experiences or anything e-publishing related that they would like to share with the community. The news blog provides all the features of an ordinary blog, the content is searchable by categories or keywords and readers are able to add comments to an article or share the article with friends.

An infrastructure for the community: the future

The approach of the CARPET Project, and its infrastructure, have already been outlined. Since the aim of the Project is to provide a platform for the community to use, all areas are fully open and every user can add content to the four areas of the platform. The CARPET Project team just acts as editorial staff, keeping the compatibility of the catalogue data sets high and preventing abuse like spam. In respect of personal rights and data privacy rights, every user is able to manage, edit and delete all their provided content and personal data at any time via the self-administration tool 'My CARPET'.

The underlying openness of all areas at the CARPET platform has a particular purpose: the future of the platform and the quality of its content is dependent on the community. The Project has set up the infrastructure, but in order to provide sustainable information of high quality, CARPET needs the help of all participants. Changes in technology or organization can only be documented accurately by the developers or software providers. Likewise, the information on processes, software and services should also rely on the shared day-to-day experience of users.

Of course, it is not mandatory to participate, but any help is always very welcome. The CARPET Project team prefers to invite everyone to use the CARPET platform in the way most beneficial to him/her, be it searching for software, finding information on services, exchanging knowledge on processes or presenting your work. However, if you notice any errors or omissions, please consider editing the information in order to help all the other e-publishing enthusiasts using the CARPET platform.

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Felix Schüle | CARPET Project

Max Planck Digital Library (MPDL), Amalienstrasse 33, 80799 Munich, Germany

Tel: +49-89-38602-275 | Fax: +49-89-38602-280 | E-mail: schuele@mpdl.mpg.de

Web: <http://www.carpnet-project.net>

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