

RMap Project Overview

RMap Project is an Alfred P. Sloan Foundation-funded initiative undertaken by the [Data Conservancy](#), [Portico](#), and [IEEE](#). The goal of RMap is to preserve the many-to-many complex relationships among traditional scholarly publications and relatively newer forms of content such as data and software, thereby supporting the continual development of scholarly communication and digital publishing.

In recent years, the content that comprises the scholarly record has become more dynamic and less “bounded.” Formerly, even digital artifacts of the scholarly record were more or less discrete objects, such as journal articles or books, usually encapsulated in a single file. Increasingly, the scholarly “article”—the primary unit of scholarly communication—is evolving into a multi-part, distributed object. The RMap project will build upon and advance the existing infrastructure that has evolved to support these new forms of publications by acting as a clearinghouse or meta-service that compiles information from various data-linking services. Informed by the feedback from a planning workshop that included a diverse set of publishers, professional societies, data infrastructure providers (e.g., CrossRef, ORCID) and data repositories, the RMap team will:

- Use IEEE’s publishing workflow and platform to demonstrate integration of publications, data and software at the time of submission (with an aim of generalizing this approach to other publishing workflows and platforms).
- Generate information graphs (RMaps) that comprise publications from IEEE’s professional societies, data from a Data Conservancy data archive and software from an external repository such as GitHub.
- Generate RMaps that demonstrate not only the linkages between the various components of the distributed scholarly objects, but also the provenance connecting the objects (e.g., use of software to process data) in a persistent manner.

As project partners, Data Conservancy, Portico, and IEEE bring a diverse set of perspectives from the publishing, scholarly society, preservation, and data communities. In consultation with partners in the international research, data repository, journal publishing, bibliographic, and funding communities, RMap looks to create an architecture and set of services that is readily integrated into those communities’ workflows and practices. Additionally, RMap will consider integration of content that is not easily or currently described with existing identifiers (e.g., software).

RMap will build on the features of the semantic web and linked data, adopting concepts from the Open Archives Initiative Object Reuse and Exchange (OAI-ORE), which specifies graphs that capture the relationships among publications, data, and other artifacts of scholarly research and communication, and facilitates the expression of the evolution of those relationships. To simplify integration with publishing and other scholarly workflows, RMap will employ a RESTful (Representational State Transfer) API and will make use of existing well-known vocabularies (e.g., Dublin Core, Friend of a Friend, Open Provenance Model, RDF Schema, and the Scholarly Contributions and Roles Ontology) in its data model.

For more information, see the RMap website at <http://rmap-project.info/>.