

Making it Easier to do the Right Thing:
Solicitation for Decision Trees Workflow

*Scholarly Commons Working Group
FORCE11
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Executive Summary

- Within FORCE11, the Scholarly Commons Working Group has been investigating the principles, implications and requirements for operationalizing a new, open, accessible order of scholarly communications ecosystem.
- In fulfillment of this, the Decision Trees Work Packages is soliciting proposals from interested parties to develop a workflow for compiling and sharing Commons-compliant decision trees that describe research outputs.
- The requirement is to produce a research output decision tree compilation and publishing workflow: a seamless set of tools that will allow people to easily create decision trees that help with decision making about conducting research openly and producing research outputs that are FAIR, open and citable. Where possible we would like to use existing tools and software that are Commons compliant but where they are not available, the proposal should to address this by developing solutions. Experience in software development and user experience are expected to be needed
- We invite interested parties to submit their proposals. We estimate the project will take 9 weeks and should be completed by 9 June 2017.

Overview

The digital age is seeing an informal convergence within the scholarly communication space: the Natural and Health Sciences, the Humanities, Arts and Social Sciences, applied and professional fields are all discovering that they have more in common when it comes to the future of research communication than differences. What is needed now is a program that will help us realize the potential of this merger: the development of a “Scholarly Commons”, a scholarly communications ecosystem designed for 21st century open and networked-based scholarship.

It is not a single platform or tool, but rather the principles, best practices, interfaces and standards that should govern the multidirectional flow of scholarly objects through all phases of the research process from conception to dissemination.

In 2015, FORCE11 was granted a Helmsley Charitable Trust Grant to develop the idea of the Scholarly Commons. Activities included two workshops held in 2016, and the final outcomes are:

- 1) A charter that outlines the guiding principles for a Scholarly Commons
- 2) And a concrete set of recommendations to ensure that collective efforts align with a set of common goals and provide “a toolset for 21st century scholarship.”

WP3: Decision Trees

Within the main Scholarly Commons Working Group, three Work Packages have been developed. This Solicitation relates to WP3: Decision Trees.

Decision trees represent the set of actions that can or should be taken to produce commons-compliant objects. The principles governing these objects are as follows:

- 1) Scholarly content (which includes all research objects) should be open by design and open by default.
- 2) Scholarly content should be FAIR: Findable, accessible, interoperable and reusable.
- 3) All scholarly objects should be citable, both for the purposes of credit to those who created them and to provide provenance.

WP3 describes a process for developing decision trees for selected research objects and processes [Helmsley goal: (landscape) visualization, dissemination]. The end goal of each decision tree is to show in practical terms how the researcher can achieve the most commons-compliant research outputs using existing tools. This includes the choice of tools and methods, as well as formats and publication decisions about end products. So, for example, decision trees are being constructed on “Testing whether a Tool is Commons-compliant” as well as “Making Data Open”.

Conclusion

While there are many tools for creating decision trees, none have the entire set of desired characteristics. In the spirit of the commons, we feel that the decision tree outputs themselves need to be commons compliant. That is, they should be: 1) Open by design; 2)

FAIR; 3) Citable.

It has therefore become apparent that we need a research output decision tree compilation and publishing workflow that is seamless, open, and commons-compliant. We say workflow, because many of the components already exist and our goal is not to recreate but to harmonize these different components into a usable workflow rather than create a new piece of software that must be further developed or maintained. We are looking to the community to help refine and implement this approach.

Process

Milestone	Date	Documents/Requirements
Publish Solicitation	6 March – 5.00pm PST 27 March 2017	Solicitation Document posted to FORCE11 site and distributed as appropriate
Queries	by 5.00pm PST 17 March 2017	Queries from interested parties to be received. All queries and responses to be published on FORCE11 website
Review Proposals, Identify and Contract with Winning Party	28 March – 7 April 2017	Proposal Documents to be reviewed by sub-committee, decision made, all participants informed, contract agreed
Active Phase of Project	10 April – 2 June 2017	Regular check-ins between project team and sub-committee
Wrap-up and Handover	5 – 9 June 2017	Final project meeting with sub-committee, publication/release of results

Requirements

The Project

Please note, given that the overriding principles for this project are to re-use existing open source systems and simplify the process for researchers, we are open to suggested improvements to the project specifications.

We are looking for a workflow that enables the following:

- 1) Users should be able to create a decision tree using a visual interface that helps them work out the tree.
- 2) Points within the decision tree should be able to be hyperlinked to other material or other decision trees.
- 3) Users should be able to comment on any node or decision point.
- 4) The decision trees should conform to a design template that will be supplied.
- 5) The output needs to be displayed on the web and also provide the capacity for feedback or commenting on individual nodes.
- 6) Decision trees should be versioned, given unique identifiers and linked to authoring metadata.

See the current example that have been compiled using draw.io:

<https://www.force11.org/group/wp3decision-trees/decision-tree-example-open-data-v-03>

We have separately commissioned a designer to work on the UX features of the finished decision trees and will work with the successful organization to ensure that communications are maintained.

A full list of requirements is to be found here: <https://goo.gl/l4gsXT> but key considerations include:

- Re-use of existing, open source components wherever possible
- Reduction of the number of steps required to make a commons compliant object
- Should be both human and machine readable
- The final trees should be static but hyperlinked.
- Each should have a persistent identifier and include versioning capabilities
- There should be a manual/template to enable adaptation by others
- Need to be able to create new trees and new versions of existing ones
- Need to be able to provide granular feedback in a simple way (annotation!)
- Need to be downloadable
- Need to link them to authoring metadata (how to cite them)
- Need to exportable into and importable from standard format(s)
- Users should be able to comment on any node or decision point
- Need to link with one or more external repositories
- Additional credit will be given to proposals that consider 508 compliance
- Interoperability with other open source components

The Proposal

The submitted proposal should consist of:

- An overall project plan, including risks and mitigating factors
- Responses to the key considerations
- Background information on the organization/individuals who will complete the work
- Recommendation for communications through the life of the project
- A budget

Completed proposals should be delivered to solicitation@force.org on or by **5.00pm PST, 27 March 2017**. Queries about the process or response content should be sent to the same email address by **5.00 PST 17 March 2017**. All questions and their responses will be posted to the FORCE11 website.