Exchange DMPs between DMP Tools using the RDA Common Standard

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The DMP Exchange team comprised developers from many of the popular DMP tools in current use today (DMPTool, DMPonline, DSW, easyDMP and Haplo). The team worked together during the hackathon to determine if the DCS JSON format could be used to exchange DMP metadata between the various systems. The goal was enabling each one of the participating systems to export their data in the maDMP format and, if possible, allowing for the creation of a new DMP from a maDMP import.

This exercise allowed each team to dedicate time towards mapping the maDMP metadata standard to their system's unique data models. Few systems capture all of the metadata currently included in the maDMP standard; however, they all collect and store this information in different ways. This work allowed the teams to identify gaps which is the first step towards adoption.

The ability for each of the systems to exchange DMP metadata means that they will each in turn be able to exchange this information with any system within the larger RDM ecosystem. Non-DMP specific systems will hopefully recognise the incentive of supporting the maDMP standard if they know that their work will allow them to integrate with all of the various DMP tools.

Results

Each of the teams was able to update or create a mechanism that allowed exporting DMP's metadata in the maDMP format. Most of the teams were also able to introduce a mechanism allowing data import to create a DMP as well.

- The DSW (see also hackathon task #2) was able to export a DMP and import it into a DMPRoadmap based system (the codebase underlying DMPTool and DMPonline) and vice versa. Moreover, submission of a DMP from DSW directly to DMPRoadmap via API has been set up and tested.

- The easyDMP system was able to export a DMP and import it into a DMPRoadmap based system.

- Haplo was able to export a DMP and import it into a DMPRoadmap based system. The source code for this proof-of-concept implementation is [available on GitHub](#)

- The DMPRoadmap system was able to import one of its DMPs into the DSW, easyDMP and the Haplo systems.

- In each scenario we were able to confirm that key pieces of metadata were properly transferred from one system to another.

The participants were also able to identify gaps within their respective data models and future work required to fully support the maDMP schema. Two scenarios were also identified that resulted in change requests for the maDMP schema. The participants were able to work around these issues during the hackathon but their addition to the standard will make communications between systems and the disambiguation of contributors more robust:

- An structure for sharing system specific information, e.g., a local system identifier or information vital to the system's ability to create a new DMP, https://github.com/RDA-DMP-Common/RDA-DMP-Common-Standard/issues/30

- A structure to identify a Contributor's or Contact's affiliation, https://github.com/RDA-DMP-Common/RDA-DMP-Common-Standard/issues/26

Support for both of these new objects in the maDMP schema will be vital to ensuring adoption of the standard across systems, particularly in scenarios where the external system does not have the resources to ensure identifiers such as ORCID are available, or where they are attempting to create a DMP and will need to link back to it for updates.

Beyond the hackathon

While most of the participant data models do not yet offer full support of the DCS model, progress was made towards mapping the high level DMP information from the maDMP standard into each one of the system data models. The confirmation that these systems could exchange information was encouraging and will likely open the door for future integrations.

Each team will need to prioritise further development to finalise the work advanced during the hackathon as well as update their system to accommodate as many elements of the standard as possible, e.g., multiple datasets. The teams should continue to communicate with one another about their plans and share their experiences with the group.