Platforms EOI: National Research Terminology Service

Project title

National Research Terminology Service

Field of Research code(s)

- 06 BIOLOGICAL SCIENCES
- 08 INFORMATION AND COMPUTING SCIENCES
- 11 MEDICAL AND HEALTH SCIENCES

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Project description

Ontologies/terminologies are the cornerstone of sharing knowledge in research. In healthcare, international terminologies such as SNOMED CT, combine with national terminologies such as the Australian Medicines Terminology, to ensure there is a shared semantic understanding of information in health records. Across all fields there are an increasing number of vocabularies, ontologies and terminologies which permit data collected in research to have shared semantics. The web ontology language, OWL, provides a way of sharing these resources; however there needs to be software tools/services which provide an API to these resources for use in experimental systems e.g. research data capture, data analytics. This service will provide a single point of storage and access to published ontologies across research. The ontologies will be available in two ways: through a RESTful API, so that terms from the ontologies can be queried and captured in other software; and through a JSON synchronisation service so that they can be downloaded and used locally. The service is based on the FHIR specification, from the healthcare domain. However, FHIR's terminology API is well suited to other fields.

Existing technology

Adapt

Ontoserver - the CSIRO Terminology Server is the basis of the National Clinical Terminology Service (NCTS), part of Australia’s digital health infrastructure. The NCTS allows the Australian Digital Health Agency to publish national standard terminologies. Organisations can access the content via a RESTful API or through a syndication service. CSIRO will adapt our terminology server to establish a National Research Terminology Service (NRTS) to allow researchers to upload and publish ontologies from across science and research, with expanded support for research ontologies from other fields.

Anticipated requirements
### Annual funding

$100,000 - $199,000

### Proposed length

3 years

### Other information

**Other information you wish to provide**

The funding will also be used to:

- gather requirements from across research for access, sharing and use of ontologies
- adapt the CSIRO terminology server
- establish the service as a scalable cloud-based deployment
- adapt ontology/terminology import features to accommodate new input formats based on gathered requirements
- establish the governance for uploading ontologies/terminologies to the server
- run a series of workshops and “connectathons” that will work with Australian researchers on accessing and using ontology content.

### Terms

**I agree to the terms**

Yes