Compare the OBO Foundry Principles with the FAIR and TRUST Principles - Abstract

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Abstract

Ontologies are powerful tools for achieving interoperability, but as open-source informatics artifacts often used as backend resources for software, they require robust guiding principles. The OBO Foundry principles, as well as the FAIR and TRUST principles provide a solid foundation. In this paper we investigate the alignment of OBO Foundry principles with the FAIR and TRUST principles, since the OBO Foundry was established prior to the FAIR movement. We also investigated whether the current FAIR principles suffice in meeting the evolving demands of ontology development and utilization. Mapping the OBO Foundry principles to the FAIR and TRUST principles revealed significant overlaps, as well as gaps. Several sub-principles within FAIR fall outside the scope of OBO Foundry. These include F3 (metadata clearly and explicitly including the identifier of the data it describes), F4 (meta)data registration or indexing in a searchable resource), A1.2 (protocol allowing for authentication and authorization procedures, where necessary), A2 (metadata accessibility even when the data are no longer available), I2 ((meta)data using vocabularies that follow FAIR principles), I3 ((meta)data including qualified references to other (meta)data), and R1.3 ((meta)data meeting domain-relevant community standards). Additionally, the sustainability principle from the TRUST principles is not explicitly addressed by the OBO Foundry principles. We advocate in favor of further refining the OBO Foundry principles to encompass the full spectrum of TRUST and FAIR principles, but this question ultimately rests with the OBO community. We also advocate in favor of expanding these principles to improve coverage of the spectrum of dimensions relevant to developing and evaluating high-quality ontologies, such principles relevant to an ontology's utility, specificity and relevance with respect to its intended purpose, versioning and change management, ease of use, adoption and community engagement.

Keywords

FAIR principles, OBO Foundry Principles, Ontologies, TRUST principles

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