Trusting Decentralised Knowledge Graphs and Web Data (TrusDeKW) Workshop

Juan Cano [1], John Domingue [2], Sabrina Kirrane [3], Philipp D. Rohde [4], Aisling Third [2], and Ruben Taelman [5]

[1] *Universidad Politécnica de Madrid, Spain*
[2] *Knowledge Media Institute, The Open University, Milton Keynes, UK*
[3] *Vienna University of Economics and Business, Vienna, Austria*
[4] *TIB Leibniz Information Centre for Science and Technology, Hannover, Germany*
[5] *Ghent University IDLab – ELIS, Ghent, Belgium*

Summary

Knowledge Graphs have become a foundation for sharing data on the web and building intelligent services across many sectors and also within some of the most successful corporations in the world. The over centralisation of data on the web, however, has been raised as a concern by a number of prominent researchers in the field. Data centralisation can lead to a number of problems including: lock-in/siloing effects, lack of user control over their personal data, limited incentives and opportunities for interoperability and openness, and the resulting detrimental effects on privacy and innovation.

A number of diverse approaches and technologies exist for decentralising data, such as federated querying and distributed ledgers. The main question is, though, what does decentralisation really mean for web data and Knowledge Graphs? What are the main issues and tradeoffs involved? How can decentralised approaches best be applied to solve the problems outlined above? Are current techniques sufficient for decentralisation, where are they lacking, and how can we improve them? This workshop was the third of three distinct workshops[2] to bring researchers together to discuss these questions. The emphasis in all of these events was on dialogue and collaboration enabling the exchange of research ideas and the creation of new knowledge.

Branimir Rakic from Trace Labs was invited to give a keynote in which he presented the Origin Trail[3] Decentralized Knowledge Graph, an open platform for publishing and querying Linked Data, and verifying its integrity against one or more blockchains. He discussed the factors that led to Origin Trail adopting Semantic Web technologies, showed large-scale applications in international trade regulation, and others, and discussed future directions and the potential impact of large language models.

[2] Previous events held at the Solid Symposium (https://solid.ti.rw.fau.de/public/2023/solid-symposium/) and Web Conference (https://www2023.thewebconf.org/), both 2023.
[3] https://origintrail.io