From: **Hirokazu Chiba** chiba@dbcls.rois.ac.jp
Subject: A position statement
Date: 13 January 2019 at 17:10
To: group-data-ws-pc@w3.org

Dear workshop organizers,

I have registered the workshop through the application form, but I have not yet sent an email.
Here I will describe the position statement.
I would appreciate it if you consider this for a presentation.

I am Hirokazu Chiba, a researcher at the Database Center for Life Science, Research Organization of Information and Systems, Japan. I have been working for application of the Semantic Web technology including RDF and SPARQL to the integration of various databases for analyses. The motivation of our use of the RDF graph model is that it is standardized and suitable for integration of heterogeneous datasets.
Generally speaking, increasing amounts of scientific and social data have been published in the form of RDF in the last decade. Although the RDF data can be queried using the SPARQL language, even the SPARQL-based operation has a limitation in implementing traversal or analytical algorithms. Recently, a variety of graph database implementations dedicated to analyses on the property graph model have emerged. However, the property graph lacks standardized specifications and the RDF model and the property graph model are not interoperable; for instance, it is currently not easy to analyze RDF data using arbitrary property graph database engines.
In this workshop, I would like to present the following issues:
1) Standardization of data models for property graphs
2) Interoperability between RDF and property graphs
We have been addressing these issues through collaboration across academia and industries [1] and now have some prototype implementations to share [2-4]. We have designed a common property graph (PG) format which can be converted to each of the specific database implementations [2]. We have also developed a framework based on the Graph to Graph Mapping Language (G2GML) for mapping RDF graphs to property graphs [3]. In addition, we have prepared a sandbox to try G2G mappings [4]. Using these prototype implementations, graph data described in the RDF model can be converted to the property graph model and can be loaded to several graph database engines.

References:
[1] Shota Matsumoto, Ryota Yamanaka, Hirokazu Chiba: Mapping RDF Graphs to Property Graphs. arXiv preprint, https://arxiv.org/abs/1812.01801 (2018)
[2] PG format: https://github.com/g2gml/about/wiki/PG-Format
[3] G2GML: https://github.com/g2gml
[4] G2G sandbox: http://g2g.bio/sandbox/

Best regards,
Hirokazu
--
Hirokazu Chiba
Database Center for Life Science
Research Organization of Information and Systems