Joint Proceedings of RSP 2017 and QuWeDa 2017

This joint volume contains the articles from the 2nd RDF Stream Processing workshop (RSP 2017) and the Querying the Web of Data workshop (QuWeDa 2017), held on May 28th and 29th, co-located with the 14th ESWC 2017 in Portoroz, Slovenia.

RSP 2017: 2nd RDF Stream Processing workshop

Data streams are an increasingly prevalent source of information in a wide range of domains and applications, e.g. environmental monitoring, disaster response, or smart cities. The RDF model is based on a traditional persisted-data paradigm, where the focus is on maintaining a bounded set of data items in a knowledge base. This paradigm does not fit the case of data streams, where data items flow continuously over time, forming unbounded sequences of data. To date several stream processing engines have been proposed to enable such applications and the semantic web community have been active in this area. However, each has defined its own extensions to RDF for modelling streaming data and query language. In this context, the W3C RDF Stream Processing (RSP) Community Group has taken the task to explore the existing technical and theoretical proposals that incorporate streams to the RDF model, and to its query language, SPARQL. In this context, the RSP Group is fostering a community to define a common, but extensible core model for RDF stream processing. This core model can serve as a starting point for RSP engines to be able to talk to each other and interoperate.

The workshop brought together members of the community interested to demonstrate and their latest advances in stream processing systems for RDF. The event fostered discussion for proposing novel RDF stream processing techniques, language extension, and benchmarking and experimental evaluation of the engines.

QuWeDa 2017: Querying the Web of Data

The constant growth of Linked Open Data (LOD) on the Web opens new challenges pertaining to querying such massive amounts of publicly available data. LOD datasets are available through various interfaces, such as data dumps, SPARQL endpoints and triple pattern fragments. In addition, various sources produce streaming data. Efficiently querying these sources is of central importance for the scalability of Linked Data and Semantic Web technologies. The trend of publicly available and interconnected data is shifting the focus of Web technologies towards new paradigms of Linked Data querying. To exploit the massive amount of LOD data to its full potential, users should be able to query and combine this data easily and effectively. This workshop at the Extended Semantic Web Conference (ESWC) presented original articles describing theoretical and practical methods and techniques for fostering, querying, and consuming the Data Web.
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