In an era of fragmented systems, data silos and an explosion of data, the last couple of decades have seen the emergence of an innovative technology that has the potential to solve this data management nightmare. We, of course, are talking about enterprise knowledge graphs and their ability to link heterogeneous data from multiple sources, incorporate new and changing data, and provide unified data access for cognitive analytics and better business decisions.

Although the term was popularized by Google in 2012, graph-based knowledge representations have been the subject of extensive academic research in the domain of knowledge representation and reasoning long before that. As a result, for many years they were associated with academics and were seen as too complex and not very applicable on an enterprise scale.

It’s quite indicative that the first Knowledge Graph Conference (KGC) took place only last year and still had a bit of an academic flavor. According to its organizers from Columbia University School of Professional Studies in New York, the ambition of the conference was to “build the community and become a leading source of learning around knowledge graphs”. Ontotext was one of the founding sponsors that helped to make this vision a reality.

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In 2020, the second edition of the conference gathered technology leaders, researchers and vendors for discussions, demonstrations and networking. This year, however, the event seemed to be more commercially oriented with some of the biggest IT companies taking part in the main program, including Microsoft, Oracle, Amazon and Accenture. This only comes to show that KG-based technologies continue to advance into mainstream enterprise operations and are adopted by an increasing number of organizations whose business is based on gathering and analyzing huge volumes of messy and complex data.

KGC 2020 had a digital format and went on between May 4-7. Its main theme was *Knowledge Graphs for AI in the Enterprise.* The first two days of the conference program were dedicated to tutorials and workshops while the second two days – to keynote presentations, discussions, start-up pitches, etc. All tutorials, workshops and keynote presentations took place in Zoom and Slack was used as an engagement playground. Apart from being a Gold Sponsor, Ontotext participated in the main program with a presentation and a tutorial.

On the second day, Ontotext's CTO Vassil Momtchev together with his team presented a half-day tutorial titled *Rapid KG Development with GraphQL and RDF databases*. During the tutorial, Vassil and the CTO team showed an audience of more than 90 participants how to deploy the new version of Ontotext Platform for building enterprise knowledge graphs, how to create a knowledge graph from a public RDF dataset, how to generate a GraphQL API to abstract the RDF database and how to develop a sample web application.

As part of the main conference program, Vassil also gave a presentation titled *Semantic Objects Please Application Developers with GraphQL and Facilitate Quality Knowledge Graphs*. He compared the current loss of knowledge because of information silos with the huge knowledge loss when the Library of Alexandria was destroyed by fire. Vassil explained how enterprise knowledge graphs can turn raw data into strategic assets and briefly described the challenges of designing, building, updating and consuming such knowledge structures. Then, he outlined the benefits of using GraphQL and Semantic Objects in the context of Ontotext Platform.

During the conference, our "virtual booth" was also very active and offered events parallel to the conference track. In one of them, our CEO Atanas Kiryakov made a demonstration where he explored the KGC 2020 knowledge graph visually and queried it with a GraphDB public end-point. The graph was created by the organizers and contained all kinds of information

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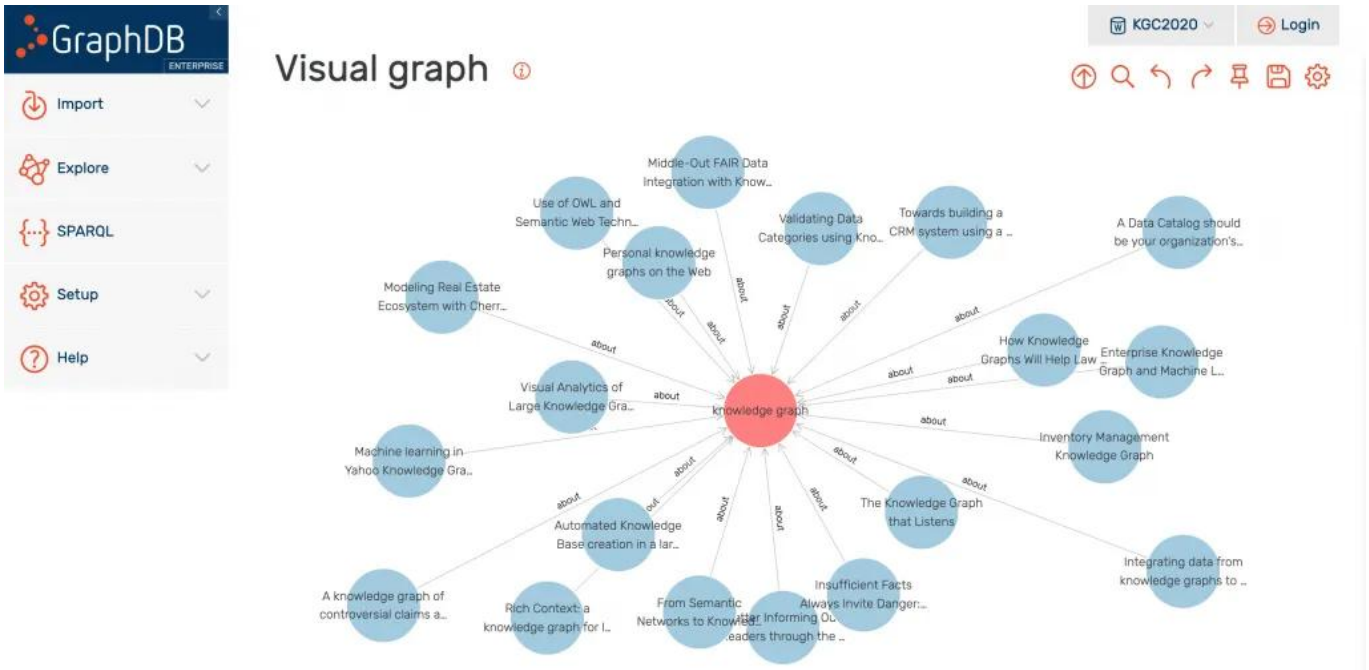
about the conference (presentation titles, descriptions, speakers, etc.) mapped to Wikipedia and Wikidata. Everyone can check out the public end-point and explore it further or just watch the video demonstration.



In another such event, Atanas made a presentation titled *Query-Time Populism* where he described the limitations related to modern trends like data virtualization and sharding as well as expressive rule-based reasoning. While “unlimited scalability”, “data stays where it is” and no-ETL are promises that every client wants to hear, Atanas explained why one should read the “small print” very carefully. He also pointed out the fundamental computations limitations related to each of these approaches. His presentation outlined the specific circumstances when these promises can be delivered so that everyone is able to decide whether these technologies would be a good fit for their project. You can watch his presentation on-demand.

The digital edition of the conference attracted about 500 participants – more than double the size of the KGC 2019 attendees. It seems that the new community it fosters will continue to evolve and collaborate, helping knowledge graph technology get out of the shadow of academic interest and into the limelight of enterprise operations.

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We are happy to see that Ontotext is well recognized in this community as an established player, with both our knowledge graph Platform and our leading graph database GraphDB. In all the years of Ontotext professional experience, our aspiration has always been to help organizations connect the dots of their enterprise knowledge, link it to global intelligence and convert it into a competitive advantage.

Do you want to learn more about how Ontotext Platform can help you minimize your technology and architectural risk and save time and effort when delivering your enterprise solutions or PoC?

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