

VIRTUAL VEHICLE

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Fig 1: EXPLORE Data Context Hub combines single point of access and graph-based data integration.

GRAPH TECHNOLOGY INTEGRATES DATA FOR CONNECTED PRODUCTS

THE SOFTWARE PLATFORM EXPLORE DATA CONTEXT HUB INTEGRATES HETEROGENEOUS DATA SOURCES, PROVIDES CONSISTENT AND NETWORKED DATA, AND ENABLES FLEXIBLE VIEWS OF THE DATA AND ITS CONTEXT.

The competitiveness of companies is increasingly manifested in their ability to deal with complexity, to react quickly to changes, and to collaborate effectively with changing partners. Thus, availability, consistency and reliability of data play a central role. The semantic context between data is required for a system view.

In contrast, the data world of companies today is mostly fractured and divided into silos. However, the central knowledge of companies lies in the relationship between data. Today, it is primarily experts with many years of experience who know about the relationship. The goal is to bring the relationship knowledge from the experts' heads into

IT-based solutions. Previous IT solution approaches cannot keep up with the highly dynamic nature of the changes.

Heterogeneous Data Sources

The EXPLORE Data Context Hub platform integrates the heterogeneous data sources and makes the knowledge in data and data relationships visible and comprehensible.

Data engineers are enabled to very effectively establish context between data without specialized IT knowledge and make it available for any application.

SUCCESS STORY

The underlying graph technology subsequently enables an arbitrary view of the data and its context.

The openness of the platform and the extensive configuration options allow integration of both brownfield and greenfield environments.

GRAPH-BASED APPROACH

The core of EXPLORE is a neo4j property graph, which is created based on various data sets and defined relationship conditions between the contained entities. Building on this, EXPLORE provides web-based service modules that enable easy and effective integration of diverse data sources, processing the content into the graph database, and high-performance traversal of the graph for queries of any complexity. Graph content can be used, explored or made available either through the sophisticated, domain-independent EXPLORE frontend application or through any customer application via the provided EXPLORE frontend API.

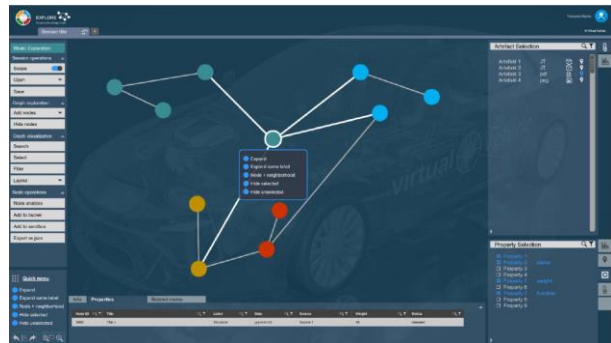


Fig 2: The graph-based relations between data allows context-based exploration of the data.

Summary

EXPLORE Data Context Hub with its innovative services enables the effective preparation and integration of heterogeneous source data. Knowledge about data and their relationships is made visible and comprehensible by providing contextual information from every perspective. Thus, EXPLORE Data Context Hub maps the consistency of data and enables a high-performance exploration of the respective data space.

Project coordination

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Diese Success Story wurde von der Zentrumsleitung/ der Konsortialführung und den genannten Projektpartnern zur Veröffentlichung auf der FFG Website freigegeben. Weitere Informationen zu COMET: www.ffg.at/comet