

# **AllegroGraph Named “2023 Best Knowledge Graph” by KMWorld Readers’ Choice**

Franz Inc., is proud to announce it has been named the “Best Knowledge Graph” in the 2023 KMWorld Readers’ Choice Award voting.

According to KMWorld, Technologies such as knowledge graphs, cloud computing and storage, data mesh and data fabric, chatbots, natural language processing, machine learning, and, most recently, generative AI (GenAI) have come to the forefront in our attempts to manage the myriad formats and knowledge silos rampant within organizations.

Business practices are changing fast, and so are knowledge management offerings. To put the spotlight on the innovative and dependable products and services that KMWorld readers depend on, the publication presents the KMWorld Readers’ Choice Award winners. After all, who best to know what products serve them best as they wrestle with so many changes happening so quickly?

In the November 2023 issue, KMWorld magazine announces the winners of the 2023 KMWorld Readers’ Choice Awards. The categories for competition were wide-ranging. In all, there were 13 areas in which products and technologies could be nominated and ultimately voted upon. They include business process management, cognitive computing and AI, customer service and support, e-discovery, knowledge graphs, text analytics, and NLP.

With the diverse array of knowledge management products, services, and technologies to consider, and the stakes getting higher for information-driven success, it can be challenging to make the right choices. There are many ways to learn more

about what is available, including white papers, research reports, and webinars, as well as consulting with experts and peers. We hope the KMWorld Readers' Choice Awards list provides an additional resource to help make the job of identifying solutions to investigate easier.

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## **DBTA 100 Companies that Matter Most in Data**

Franz Inc. is proud to announce it has been named to Database Trends and Applications "100 Companies That Matter Most in Data."

AllegroGraph provides organizations with essential Knowledge Graph solutions, including Large Language Models (LLMs), Graph Neural Networks, Graph Virtualization, GraphQL, Apache Spark graph analytics, and Kafka streaming graph pipelines. These capabilities exemplify AllegroGraph's leadership in empowering data analytics professionals to derive business value out of Knowledge Graphs.

"The data landscape continues to increase in size and complexity and is more distributed than ever before," said Tom Hogan, Group Publisher, Database Trends and Applications. "Spanning the wide range of established legacy technologies from MultiValue to cutting-edge breakthroughs such as LLMs, the DBTA 100 is a list of hardware, software, and service providers working to enable their customers' data-driven future."

"Franz Inc. is continually innovating and we are honored to

receive this acknowledgement for our efforts to deliver leading edge solutions in Data management,” said Dr. Jans Aasman, CEO, Franz Inc. “Organizations across a range of industries are realizing the critical role that Knowledge Graphs play in creating rich, yet flexible Enterprise Data Fabrics and AI-driven applications. AllegroGraph with FedShard uniquely provides companies with the foundational environment for delivering Graph based AI solutions with the ability to continually enrich and contextualize the understanding of data.”

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According to KMWorld, Global enterprises are making substantial investments in developing innovative approaches and strategies for competing successfully in a knowledge-based market. Such innovative practices, resulting in the development of knowledge-intensive products and services, are prevalent among enterprises in North America and Europe.

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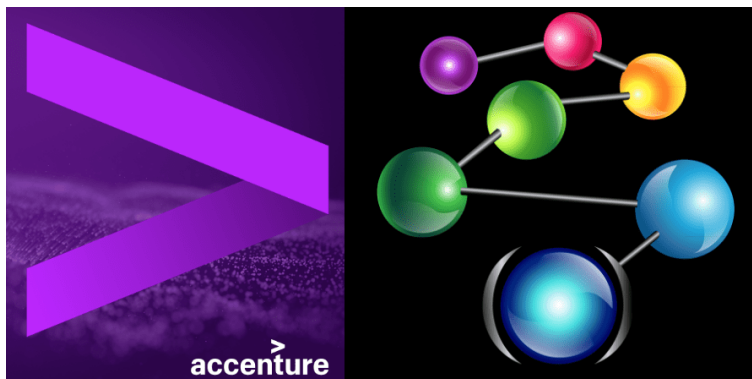
service and support, e-discovery, knowledge graphs, text analytics, and NLP.

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# The Knowledge Graph Conference 2022

## Knowledge First Design For Dynamic Intelligent Contact Centers, And Beyond



Accenture (NYSE: ACN) recently acquired N3 because Fortune 100 Companies were selecting N3 as their intelligent contact

center of choice. N3's rise in visibility is due to the tangible ROI results delivered with "Mia" – N3's groundbreaking Market Intelligence Assistant. Mia, is an always-on AI and machine learning Knowledge Graph platform that aggregates insights and delivers the most important, contextually relevant insights to the Sales or Customer Success Advisor during an active conversation in order to facilitate successful sales outcomes.

Accenture's Slides

Franz's Slides

Presentation Abstract

Shannon Copeland – Accenture



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# Knowledge Graph Standards in Ambient Computing

By Jans Aasman, CEO

Ambient computing is a broad term that describes an environment of smart devices, data, AI decisions, and human activity that enables computer actions alongside everyday life, without the need for direct human commands or intervention. Ambient computing represents an unparalleled opportunity to enhance almost every sphere of society – from the professional to the personal. And in my opinion, it is also the ultimate use case for which semantic knowledge graphs were created.



With knowledge graph standards, ambient computing is no longer a mere ideal or science fiction fantasy on television or in books. It's a real computational model involving Internet of Things (IoT) endpoints, AI analytics, machine reasoning, orchestration, and low latent event processing at

the edge to anticipate users' desires and perform timely action – without explicit commands.

For example, a motion detector might identify a homeowner's return from work at night, open the garage accordingly, and trigger a thermostat to increase the air conditioning to a desired temperature while smart gadgets in the kitchen begin preheating the oven for dinner.

Each of these actions happens without someone deliberately engaging with these disparate systems. One's interactions with his or her environment dictate which events occur, relegating the computational process to the background to benefit humans.

Different vendors currently have varying degrees of ambient computing in place. Amazon has several household devices that interact with Alexa, for example. Still, the larger vision of ambient computing can't be restricted to one vendor and must include timely data exchanges between vendors, products, and operating systems.

Doing so requires systemic interoperability, the likes of which the universal standards powering semantic graph technology have provided for years. This smart data approach is integral to the mainstream adoption of ambient computing, which is impending.

Read the full article at [Dataversity](#).

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# Linguistic Reduction and Knowledge Graphs for Next-Gen Chatbots

Dr. Jans Aasman and Dr. Richard Wallace were recently published in AIThority.



Chatbots are dynamic agents with the express capability to engage in conversational interactions. By applying innovative linguistic reduction rules to user utterances, we empower chatbots to

reduce any statement or sentence into its most basic form so bots can swiftly understand it and appropriately respond.

The relationship between linguistic reduction rules and chatbots for natural language technology applications is two-fold. First, this pairing drastically simplifies chatbot applications so that no matter what text or speech the chatbot encounters, they can readily understand and respond to it. Secondly, by adding elements of knowledge graphs and taxonomies to this tandem, the resulting combination can make chatbots more useful than any current commercial offerings—including Alexa and Siri.

## Reductions Simplify Language

The general concept behind this symbolic reasoning approach is that when people speak or write they use more words than necessary to produce the simplest logical statement they're conveying. For example, there are numerous ways to ask someone



his or her name, including *“Could you tell me your name, please?”*

Reduction rules would reduce this simple question to *“What is your name?”*, so bots can quickly comprehend its meaning, then use additional techniques to answer it.

Although this example seems trivial, it illustrates the basic formula that’s integral for revamping a host of business use cases from analyzing legal documents to forms for regulatory compliance and heightening call center interactions—or any other NLP application.

Read the full article at [AITHority](#).

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## **AllegroGraph      Named      2022 “Trend Setter”**

**AllegroGraph Named 2022 “Trend Setter” by Database Trends and Applications**

AllegroGraph has been named a 2022 Trend Setting Product by Database Trends and Applications. Additionally, AllegroGraph was recently named “Best Knowledge Graph” by KMWorld Readers’ Choice award voting.



“The world is changing rapidly, and so are enterprise data requirements. Whether it is anticipating supply chain

problems, addressing customer concerns with agility, or identifying new opportunities and pouncing quickly, the ability to achieve a comprehensive view of all available

information for real-time decision making has become a strong requirement,” said Thomas Hogan, Group Publisher of Database Trends and Applications. “That is why it is more important than ever to identify products and services that help to deliver results. This list focuses on products that represent a commitment to innovation and provide organizations with tools to address rapidly evolving market requirements.”

“Franz Inc. is continually innovating and we are honored to receive this acknowledgement for our efforts in setting the pace for Knowledge Graph Solutions,” said Dr. Jans Aasman, CEO, Franz Inc. “We are seeing demand for Intelligent Data Fabrics take off across industries along with recognition from top technology analyst firms that Knowledge Graphs provide the critical foundation for Data Fabric solutions. AllegroGraph with FedShard uniquely provides companies with the foundational environment for delivering Graph based AI solutions with the ability to continually enrich and contextualize the understanding of data.”

[Read more about the award.](#)

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## **Predictions: Quantum AI, Graph Neural Networks, and Personal Data Pods**



The new year will bring us many exciting developments in data-enabling technologies including the merging of artificial intelligence with quantum computing and graph neural networks, which will power extremely complex, next-generation algorithms. Knowledge graphs will become lego-like with the ability

to be plugged into diverse applications. With mounting concern over social media sites using personal data, expect new ways for users to regain control with “personal data pods.” Enterprises will interweave graphs with document and time-series databases to create a single enterprise-wide data fabric.

### **Quantum AI Environments Will Emerge**

recent advances in quantum computing, in 2022, we will start to see the convergence of quantum computing with artificial intelligence, knowledge graphs, and programming languages. These distinct technologies will start to morph into a single computing environment operating in one memory space as a fully integrated solution. The separation between programming and AI/analytics will begin to blur as developers use Quantum-based computer languages to generate incredibly complex, next-generation AI algorithms and applications that result in new discoveries based on the quantum acceleration of machine learning and deep learning.

### **Graph Neural Networks (GNNs) Will Advance AI Reasoning**

In the past few years, organizations have experienced the advantages of combining graphs with artificial intelligence. In 2022 and beyond, leading companies will apply machine learning’s advanced pattern matching to graph neural networks (GNNs), which are complex high-dimensional, non-Euclidian datasets. By fusing GNN reasoning capabilities with classic

semantic inferencing available in AI knowledge graphs, organizations will get two forms of reasoning in one framework. Automatically mixing and matching these two types of reasoning is the next level of AI and produces the best prescriptive outcomes. This “total AI” is swiftly becoming necessary to tackle enterprise-scale applications of mission-critical processes like predicting equipment failure, optimizing healthcare treatment, and maximizing customer relationships.

Read the full article to see the additional predictions:

**Facebook Users Will Regain Control Through Personal Data Pods**

**Knowledge Graphs Will Become Composable**

**Graph, Document and Time-Series Databases will Dominate by 2030**

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## **Franz’s AllegroGraph Named “Best Knowledge Graph” by KMWorld Readers’ Choice**

**AllegroGraph also wins Finalist position for “Best Cognitive Computing and AI Platform”.**

Franz Inc., is proud to announce it has been named the “Best Knowledge Graph” in the 2021 KMWorld Readers’ Choice Award voting. Additionally, AllegroGraph was considered a “Finalist” in the category of Best Cognitive Computing and AI platforms for the Readers’ Choice awards.

According to KMWorld, the world of knowledge management

continues to expand with the steady influx and evolution of innovative products and technologies to help organizations extract the right information for use by the right people at the right time. The value of knowledge management solutions and services is reflected in growth projections for the global knowledge management market, which was valued at about \$206.9 billion in 2016 and is expected to reach more than \$1,232 billion by 2025, representing a compound annual growth rate of more than 22%, according to Zion Market Research.



In this November issue, KMWorld magazine announces the winners of the 2021 KMWorld Readers' Choice Awards. The categories for competition were wide-ranging. In all, there were 14 areas in which

products and technologies could be nominated and ultimately voted upon. They include business process management, cognitive computing and AI, customer service and support, e-discovery, knowledge graphs, text analytics and NLP.

"As the stakes get higher for information-driven successes, businesses must make technology decisions from an increasingly diverse array of knowledge management offerings," said Tom Hogan, Group Publisher at KMWorld. "The Readers' Choice Awards put the spotlight on innovative and dependable solutions and services that can help companies solve pressing challenges and take advantage of new opportunities."

"Franz Inc. is continually innovating and we are honored to receive this acknowledgement for our efforts in setting the pace for Knowledge Graph Solutions," said Dr. Jans Aasman, CEO, Franz Inc. "We are seeing demand for Intelligent Data Fabrics take off across industries along with recognition from top technology analyst firms that Knowledge Graphs provide the

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## **AllegroGraph v7.2 – Now Available (GNN, Virtual Graphs, Spark, and Kafka)**

AllegroGraph 7.2, provides organizations with essential Data Fabric tools, including Graph Neural Networks, Graph Virtualization, Apache Spark graph analytics, and streaming graph pipelines. These new capabilities exemplify AllegroGraph’s leadership in empowering data analytics professionals to derive business value out of Knowledge Graphs.

### **Graph Neural Networks**

With AllegroGraph 7.2, users can create Graph Neural Networks (GNNs) and take advantage of a mature AI approach for Knowledge Graph enrichment via text processing for news classification, question and answer, search result organization, event prediction, and more. GNNs created in

AllegroGraph enhance neural network methods by processing the graph data through rounds of message passing, as such, the nodes know more about their own features as well as neighbor nodes. This creates an even more accurate representation of the entire graph network. AllegroGraph GNNs advance text classification and relationship extraction for enhancing enterprise-wide Data Fabrics.

## **Graph Virtualization**

AllegroGraph 7.2 allows users to easily virtualize data as part of their AllegroGraph Knowledge Graph solution. When graphs are virtual, the data remains in the source system and is easily linked and queried with other data stored directly in AllegroGraph.

Any data source with a supported JDBC driver can be integrated into an AllegroGraph Knowledge Graph, including Databases (i.e. Apache Cassandra, AWS Athena, Microsoft SQL Server, MongoDB, MySQL, Oracle Database); BI Tools (i.e. IBM Cognos, Microsoft PowerBI, RapidMiner, Tableau); CRM Systems (i.e. Dynamics CRM, Netsuite, Salesforce, SugarCRM); Cloud Services (i.e. Active Directory, AWS Management, Facebook, Marketo, Microsoft Teams, SAP, ServiceNow) and Shared Data Files (i.e. Box, Gmail, Google Drive, Office365).

## **Streaming Graph Pipelines using Kafka**

Enterprises that need real-time experiences are starting to adopt streaming pipelines to provide insights that adapt to new data in real-time rather than processing data in batches. AllegroGraph is often used as an Entity Event Knowledge Graph platform in diverse settings such as call centers, hospitals, insurance companies, aviation organizations and financial firms.

AllegroGraph 7.2 can be used seamlessly with Apache Kafka, an open-source distributed event streaming platform for high-performance data pipelines, streaming analytics, data

integration and mission-critical applications. By coupling AllegroGraph with Apache Kafka, users can create a real-time decision engine that produces real-time event streams based on computations that trigger specific actions. AllegroGraph accepts incoming events, executes instant queries and analytics on the new data and then stores events and results.

## **Graph Analytics with Apache Spark**

AllegroGraph 7.2 enables users to export data out of the Knowledge Graph and then perform graph analytics with Apache Spark, one of the most popular platforms for large-scale data processing. Users immediately gain machine learning and SQL database solutions as well as GraphX and GraphFrames, two frameworks for running graph compute operations on data.

A key benefit of using Apache Spark for graph analytics within AllegroGraph is that it is built on top of Hadoop MapReduce and extends the MapReduce model to efficiently use more types of computations. Users can access interfaces (including interactive shells) for programming entire clusters with implicit data parallelism and fault-tolerance.

## **Availability of AllegroGraph 7.2**

AllegroGraph 7.2 is immediately available directly from Franz Inc. For more information, visit the AllegroGraph Quick Start page for cloud and download options.

## **Examples**

Visit our Github AllegroGraph Examples page.