**Autonomy IDOL Structured Probabilistic Engine**

Achieve an entirely new level of understanding by turning your information into a powerful asset that drives business growth

Autonomy built its business on pioneering the market for understanding unstructured data, and today over 20,000 customers depend on Autonomy technology for a range of business applications. Now Autonomy is applying the same advanced technologies to transform the database market, by turning legacy Relationship Database Management Systems (RDBMS) into next-generation probabilistic inference engines that can understand “shades of gray.”

Although the computing world has changed significantly since the relational database model was introduced 40 years ago, minimal innovation has occurred in this mature market. RDBMS technology is rigid and unintuitive, unable to understand patterns of data or patterns of usage. The technology often closes the door on business opportunities when “no match” is found, and the system is unable to make an educated guess based on two data points that at face value may seem unrelated, but actually represent an important connection and business opportunity.

Autonomy IDOL SPE represents a radical shift in the intelligence of database processes. It can deliver the ability to understand meaning within data. The product is a dynamic, self-learning solution that can automatically make connections in the data that RDBMS and Business Intelligence (BI) technologies are ill-equipped to deliver.

IDOL SPE transforms the RDBMS into a next-generation probabilistic inference engine by:

- **Breaking out of a black and white world to understand the “shades of grey” in the data**
- **Rendering “no exact match” a problem of the past by automatically spotting patterns in the data to make accurate predictions**
- **Ensuring delivery of relevant, personalized results by automatically detecting patterns in data within heterogeneous sources and incorporating information gleaned from users’ interactions with the data**

### Adding Intelligence to the Database

IDOL SPE leverages results from interactions, usage, and datasets to continually refine and perfect understanding of the data space. This “self-learning” capability is extremely valuable in a business context, as organizations can leverage the insights to continually improve processes, operations, and interactions with customers.

IDOL SPE can be broadly explained within the context of two spheres that are inexorably interconnected: Patterns of Data and Patterns of Use.

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“When the difference here is that instead of having analysts to create the data warehouse/mart and undertake queries after the event, the ‘what if?’ process potentially becomes automated and truly real-time…As organisations renew themselves to come out of a recession, IDOL SPE may be just the sort of disruptive technology they need.”

Mike Davis, Ovum, Sept 2009
Patterns of Data

IDOL SPE enables computers to replicate the human ability to intelligently recognize and understand complex patterns in data automatically, which can in turn be used beyond the confines of the structure imposed by the source of data. IDOL SPE can thus break out of the restricted scope of the structured query that limits traditional database technologies, and relate n-dimensional structured objects to one another conceptually, even where no direct field match exists or when they belong to entirely different databases.

For instance, if we have two distinct databases with data representing last year's sales, one in Euros and the other in Dollars, with slightly different values due to the latter containing information about returned stock, IDOL SPE can automatically detect that both data sets contain the same data, without the need for rules and scripts.

Patterns of Usage

Users constantly interact with data but too often businesses fail to capture and leverage this information in a meaningful way. Only the final transactional behavior is recorded and logged into business applications. IDOL SPE recognizes the importance of user behavior and uses both potential and committed behavior patterns to inform its descriptive space. All user interaction can be incorporated to automatically evaluate community trends as well as individual user trends.

For instance, an airline can leverage IDOL SPE to improve the online customer experience and increase sales. A customer searching for a flight from New York to San Francisco at a date and time when all flights are sold out will automatically be offered an alternative airport such as Oakland or San Jose, rather than returning “no results” to the customer’s search. IDOL SPE infers the result from patterns in the data and its usage without the need for formulas, scripts or other means which require prior knowledge of cases and exceptions such as is the case here with geographic information.

Going Beyond Legacy Technologies

While legacy technologies will likely continue to serve as the predominant stores for structured information, the methods for analyzing this business-critical information is changing.

With IDOL SPE, probabilistic modeling surfaces patterns in the data without prescriptive prior knowledge, and enables these patterns to be used in direct interaction with business functions. This greatly reduces the amount of manual scripting for its creation and maintenance, as well as allowing broad new insights to be illuminated.

IDOL SPE becomes even more powerful and indispensable when complex scenarios with multiple disparate databases are involved. In these cases, IDOL SPE can identify patterns across the sources with no need for expensive data warehouses or BI-type integrations. Legacy solutions are ill equipped and prohibitively expensive for performing such sophisticated operations.

Recognizing its value in certain cases, IDOL SPE fully supports traditional methods used by BI applications. Simple and complex SQL queries (FIND, JOIN, ORDER BY, SELECT, etc.) can be entered to pinpoint and manipulate search results, or parametric searches can be performed based on defined metadata, as is often done in eCommerce applications.

About Autonomy

Autonomy Corporation plc (LSE: AU. or AU.L), a global leader in infrastructure software for the enterprise, spearheads the Meaning Based Computing movement. It was recently ranked by IDC as the clear leader in enterprise search revenues, with market share nearly double that of its nearest competitor. Autonomy's technology allows computers to harness the full richness of human information, forming a conceptual and contextual understanding of any piece of electronic data, including unstructured information, such as text, email, web pages, voice, or video. Autonomy's software powers the full spectrum of mission-critical enterprise applications including pan-enterprise search, customer interaction solutions, information governance, end-to-end eDiscovery, records management, archiving, business process management, web content management, web optimization, rich media management and video and audio analysis.

Autonomy's customer base is comprised of more than 20,000 global companies, law firms and federal agencies including: AOL, BAE Systems, BBC, Bloomberg, Boeing, Citigroup, Coca Cola, Daimler AG, Deutsche Bank, DLA Piper, Ericsson, FedEx, Ford, GlaxoSmithKline, Lloyd’s TSB, NASA, Nestlé, the New York Stock Exchange, Reuters, Shell, Tesco, T-Mobile, the U.S. Department of Energy, the U.S. Department of Homeland Security and the U.S. Securities and Exchange Commission. More than 400 companies OEM Autonomy technology, including Symantec, Citrix, HP, Novell, Oracle, Sybase and TibCO. The company has offices worldwide. Please visit www.autonomy.com to find out more.