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Cool Vendors in BI and Performance Management, 2009

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Gartner's business intelligence (BI)/performance management (PM) team has chosen six "cool" vendors to highlight. While these vendors do not have wide brand recognition, they represent innovation in the ever-growing BI and PM space.

Key Findings

- Altosoft provides a rapid development operational BI platform, supporting real-time updates, simple connection to data sources and process monitoring features.

- Attivio unifies analysis across structured and unstructured data by combining relational queries with fuzzy search capabilities.

- Glassbeam allows distributors of physical, networked products to track customer use and configuration of the devices.

- Lyzasoft's all-in-one desktop BI sandbox empowers business analysts to easily integrate, transform and analyze disparate data, and create reports and dashboards without IT assistance.

- Prudsys provides a real-time recommendation engine for retailers, along with various modules for scoring, optimization and planning algorithms.

Recommendations

- Although the vendors discussed in this document have caught our attention as being cool, be aware that each faces challenges, including competition and growth during an economic downturn.

- Investigate more deeply those vendors and technologies that catch your eye and are relevant for your organization.

- Share these findings with business users, ideally through the mechanism of a BI competency center.

ANALYSIS

This research does not constitute an exhaustive list of vendors in any given technology area, but rather is designed to highlight interesting, new and innovative vendors, products and services. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

What You Need to Know

This report is only a sample of the cool vendors in the BI and PM market, as it continues to evolve through innovation. These and other vendors offer attractive solutions, but organizations should govern their adoption. The demand from business users for information processing is growing faster than IT resources can address, especially with traditional BI platforms. Products that focus on self-service, process, unstructured data and point solutions can meet some of the demand, but their adoption can also lead to a more chaotic environment if they are not adopted as part of a BI/PM framework.

Altosoft, Media, Pennsylvania, U.S. (www.altosoft.com   )

Analysis by Bill Gassman

Why Cool: Altosoft blends in-memory BI, data integration, process discovery, business activity monitoring and incident management into a style it calls "business process intelligence." Altosoft's InsightBI product drives continuously updated dashboards that can be rapidly built and updated as new data is received. Its reporting and dashboard engine is designed for development by end users using a "point, drag and drop" approach. No Structured Query Language (SQL) or scripting skills are required, and the product includes an efficient, incremental extraction, transformation and loading (ETL) function that collects only the data required to maintain the metrics being monitored. Its Insight Incident Manager adds to the cool factor, tracking, aggregating and escalating alerts, as well as providing collaboration features, so the loop can be closed between sensing critical events and a response.

Altosoft's MetricsMart uses in-memory techniques to maintain complex metrics rather than raw numbers. The metrics are stored in a standard database management system (DBMS), either Oracle or Microsoft SQL Server, providing high availability and offering data access to the InsightBI reporting tool, as well as third-party tools. An additional function of the MetricsMart maintains process flows and state, which drives process performance monitoring applications. To round out the cool factor, Altosoft offers free downloads of its Insight Personal Edition, a subset of the product that can be used for evaluation.

Challenges: With its InsightBI product line available since 2006, Altosoft has had difficulty finding a well-defined market in which to position its technology. It remains relatively undiscovered beyond several significant implementations, mostly in financial services. The core technology is well suited for business process monitoring and business activity monitoring, as it allows for process discovery and can predict the impact of changing conditions as they occur. Its metrics database is open to external tools, but there is no provision for automatically synchronizing with external metric definitions. The market for stand-alone process discovery and monitoring tools is still immature, and there are other process-focused vendors — such as IDS Scheer and Pallas Athena — promoting autodiscovery of processes. In response, Altosoft has recently positioned its products against BI solutions, including in-memory offerings such as IBM Cognos Now, QlikTech and Tibco Spotfire, although it lags behind QlikTech and Spotfire in visualization techniques.

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Who Should Care: For large organizations, Altosoft should be evaluated by the IT department as a tactical solution to operational BI needs. The "sweet spots" are rapid report development by business analysts, data exploration with in-memory performance and process monitoring where process automation tools are not deployed. Altosoft is also targeting midsize organizations, with its products positioned as a lightweight BI platform, but it needs more references in this area. Its products can also be licensed by independent software vendors to provide BI functionality within a business application, either on-premises or via a software-as-a-service (SaaS) model.

Attivio, Newton, Massachusetts, U.S. (www.attivio.com   )

Analysis by James Richardson

Why Cool: Attivio promises to deliver a unified view of information by breaking down the wall between the quantitative world of BI and the semistructured world beyond its scope. This is not a new or unique claim, but one that Attivio's Active Intelligence Engine (AIE) makes more attainable by being able to combine relational SQL-like queries with fuzzy searches. Unlike search engines that index flattened SQL query results to enable access to structured data, AIE streams structured database tables directly into its indexed repository and then enables access via its patent-pending "query side join operator." The query-side join operator is essentially the familiar join operator of the relational database model. Every database record indexed in AIE includes the source table name in its metadata information. On the unstructured side, Attivio makes use of entity extraction (for example, automatically finding people, locations and organizations). AIE uses this information to join records from different tables (or the same table — self-join) to form a single result set. Users benefit from the flexibility of this ad hoc approach, dynamically generating queries to join together any set of tables and document collections to use in their analysis. Why is this cool? Because it means users can explore the "what" and the "why" in one step; for example, using search to combine a classic structured query with qualitative information (for example, "show my 20 worst-performing products by revenue with associated online reviews and ratings"). In addition, Attivio enables users who would normally be too intimidated to use an ad hoc query tool, but who are quite comfortable with a search engine, to find the information they need in a structured database.

Challenges: AIE is one of an emerging class of search-oriented data discovery tools (see "The Rise of Data Discovery Tools"). Like the other offerings in this space, as an enhancement rather than a replacement of current technology, Attivio must take care to clearly position its offering in relation to organizations' installed BI platforms, where it may be perceived as a threat, and to their selected enterprise search tools. Attivio will inevitably find itself competing against the megavendors, which already have their own "integrated BI and search" plans. SAP BusinessObjects Polestar, for example, combines BI and search capabilities with text mining to enable analysis of the sentiment of the language in semistructured data, which is beyond the scope of Attivio's current capabilities but is planned in an upcoming release. Attivio must also be prepared to prove the data scalability of AIE if it is to be selected by large enterprises — opening access to structured and unstructured data to thousands of users means AIE's repository will need to handle potentially billions of records.

Who Should Care: BI managers wanting to give users the chance to go beyond the analysis and reporting of structured data will find Attivio's proposition of interest (for more information on combining BI and search, see "Integrating BI and Content Analytics Gives Better Results Than Using Them Separately"). In addition, CIOs looking to make BI more pervasive might consider AIE, as it will make it easier for workers not accustomed to traditional BI tools to find the information they need to make decisions.

Glassbeam, Sunnyvale, California, U.S. (www.glassbeam.com   )

Analysis by Gareth Herschel

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Why Cool: Once a product is sold to the customer and activated or installed, it can be difficult or impossible to keep track of how it is used and modified. However, understanding how a product is actually used (versus how the company expects it to be used or how customers claim it will be used) is important to the success of an organization's customer relationships and product strategy. Products are increasingly becoming intelligent (with embedded systems monitoring use and performance) and enabled for Internet access. Glassbeam allows all parts of an organization to have access to a continuous feed of product use (for example, volumes and workload fluctuations for a digital printer, performance data for an automobile) and configuration data (for example, firmware versions and hardware modifications) through a SaaS portal from a product data warehouse that can be created in less than two months (considerably faster than normal). This enables: groups, such as service and support, to understand how a device is configured and being used (enabling faster resolution, or prevention, of trouble tickets); sales to identify upsell opportunities based on the use of current devices; and R&D teams to see how products are actually used and to design improvements accordingly.

Challenges: The ability to have access to this data is novel for most organizations, so planning for it is not routine. Glassbeam will have to establish a foothold within customer organizations (probably with the service and support teams) and then champion the concept across the organization. There are also potential privacy concerns among customers in having the use of "their" devices monitored. Glassbeam will probably start with corporate products, with fewer privacy concerns, before moving into consumer markets in which ongoing performance monitoring can be sold as a premium feature (for example, automotive diagnostics).

Who Should Care: Manufacturing organizations that supply products whose configuration may be changed by customers and whose usage profile is likely to indicate multiple different customer segments, each with their own priorities. Customer service and support departments wishing to resolve issues caused by inappropriate user configuration, incompatible firmware versions, or hardware failures. Business development and product development groups wanting to understand how products are actually being used by customers, to identify product enhancement or sales opportunities.

Lyzasoft, Denver, Colorado, U.S. (www.lyzasoft.com)

Analysis by Rita Sallam

Why Cool: There is increasing demand from business analysts for self-service options to access, manipulate, synthesize, visualize and communicate data. Through an integrated, all-in-one, desktop BI tool, Lyzasoft addresses this gap by empowering business analysts to intuitively and iteratively combine data from disparate databases, visually transform it, discover, explore and analyze it, and publish reports and dashboards — without scripting or IT assistance. Lyzasoft includes a columnar storage system built into the desktop application, making it well suited to analytic requirements and giving it the ability to analyze millions of rows without the RAM requirements of in-memory solutions, or the row or data size limitations of other desktop BI solutions (for example, Excel and Access). Lyzasoft's intuitive graphical environment provides analysts with a sandbox to build up analyses iteratively with an extensive set of "out of the box" functions and statistics for more complex analysis.

As Lyzasoft binds the data with its metadata, the analysis retains its lineage from data sources through filters, transforms and joins to the presented tables and charts, so a record of all the steps performed in an analysis with time stamps — from data sourcing through to the creation of presentations — is retained. This allows analysts to experiment with data and perform analysis in a more auditable, managed environment than with other personal or workgroup BI solutions. Moreover, when a user shares results with another Lyzasoft user, the metadata associated with the result set is also shared by the business analyst through the user interface surfacing the

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assumptions behind the data. This allows a viewer of the report to track and audit where the data in the report came from and how it was manipulated to derive the results.

For example, a business analyst with a question in mind or hypothesis regarding a problem or opportunity might first combine data from two sources, then filter and sort the data. After building a chart of the massaged data, the analyst decides that if yet another data source is combined, the results will be more useful. So the analyst combines an additional data source and performs some further analysis of the data by adding calculated columns. Finally, the analyst creates a presentation to share with the decision maker based on the analyzed data. The decision maker gains confidence in the analysis by looking at the report metadata and lineage. After the analyst's meeting with the decision maker, the analyst updates the data and slightly changes the analysis based on feedback, and then creates an updated presentation, and the incremental steps are added to the audit trail in the metadata.

Challenges: As with other personal, workgroup, or departmental BI platforms, Lyzasoft's challenge will be in overcoming the resistance of IT departments — which have been trending toward tool consolidation — to the introduction of yet another BI tool into their infrastructure. While the metadata auditing features of Lyza could inhibit the tendency of middle managers to obfuscate the "truth" by "dancing" with the numbers (one of the fatal flaws of BI), these tools pose risks and challenges to implementing enterprise standards and data governance, and do not integrate well with enterprise metadata initiatives. While Lyza offers some built-in auditability, the company recognizes that it must go further to alleviate IT concerns. A server component that will allow analysts to publish, consume, extend and share analysis is currently under development. Another concern is that Lyzasoft's desktop approach bucks the trend of report delivery via the Web. To address this, Lyzasoft plans to build functionality into a future release that will enable publishing and refreshing of reports from a Web browser. Finally, Lyzasoft, a self-funded offshoot of an established professional services organization with limited dedicated resources, must differentiate itself and build adoption in an emerging, yet increasingly crowded, data discovery and visualization space, where better-funded vendors such as QlikTech, Tibco Spotfire, Tableau Software, Advisor and Microsoft's announced project Gemini, along with many new startups such as SiSense, are vying to fill this unmet need.

Who Should Care: BI competency centers seeking a self-sufficient, yet "quasi managed," personal or workgroup platform for business analysts beyond Excel, and where requirements cannot be met with existing tools, should take note of Lyzasoft. So should analysts seeking an intuitive, self-service tool with integrated workflow for data integration and transformation, ad hoc analysis, and reporting and dashboards presentation. Moreover, because Lyzasoft tracks what data is included in the analysis, and data management concerns can be addressed in advance in a safe, sandbox environment, it can provide an effective way to build prototypes of what a data warehouse investment could provide. Lyzasoft offers a yearly subscription model in a Lyza Lite version ($199 per year) for personal data sources (Excel, Access and text files) and a Lyza version ($899 per year) for accessing SQL Server, MySQL, Oracle, PostgreSQL, DB2, Sybase and databases compliant with Open Database Connectivity (ODBC). Both versions are available for Windows, Mac or Linux operating systems.

Prudsys, Chemnitz, Germany (www.prudsys.com)

Analysis by Andreas Bitterer

Why Cool: Prudsys is a privately held company and was founded in 1998 as a spinoff from the Technical University of Chemnitz as a data mining startup. The company has 30 employees and 70 customers. It focuses on the retail sector, providing solutions for both brick-and-mortar and e-commerce retailers. Its flagship product is a recommendation engine based on innovative self-learning algorithms, for which prudsys holds three patents, originally codeveloped with the University of Bonn. In contrast to offline basket analysis for recommending potential products

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("Customers who bought product A also looked at product B"), the prudsys engine reacts to real-time behavior, including Web site clickstream data, to let the engine "interact" with potential customers while they are browsing the online shop. The system attempts to prevent the cancellation of an online purchase by offering individual actions, such as suitable payment options or online chat. The core system includes six modules: product or content recommendation, newsletter personalization, scoring, data cleansing, price optimization and assortment planning. Prudsys is a full member of the Data Mining Group (DMG) and is contributing to the development of data mining standards, such as the Predictive Model Markup Language (PMML).

When using the prudsys recommendation engine, customers can choose between various models. Most use the prudsys system as an on-premises stand-alone system that interacts with the front-office applications. The architecture also exposes a Java application programming interface (API) and a set of Web services for administration, data access and recommendation exchange, which can be used to embed the engine into various parent applications. Through its Ireus subsidiary, prudsys offers the solution in a SaaS model, which is hosted by Management Hosting, a third party. That way, the customer configures the rules online via an extranet and embeds the generated code in its own shopping portal. Prudsys is well established in approximately half the top 20 German catalog and mail-order retailers and in about a third of the top 100 German retail stores.

Challenges: Prudsys is an R&D-centric vendor addressing mainly the German-speaking market, but it has also signed a few international customers. Although the technology may be relevant in other vertical markets — for example, banking and insurance, travel and transportation, and pharmaceuticals — the vendor's visibility is limited to the retail sector. Its limited sales and professional services workforce is a considerable barrier to expansion into other industries. Prudsys is planning to reach outside its core geographic region by opening an office in the U.K. in 2009, but its limited marketing budget and lack of a network of system integration partners, resellers and independent software vendors hinder its overall expansion plans. While prudsys' closest competitors (Avail Intelligence, from Malmo, Sweden, which also has a presence in central Europe, and California-based Baynote, which is focusing more on the U.S. market) are equally small organizations, the large data mining platform vendors, such as Fair Isaac, SPSS and SAS, which have a much wider reach, "deeper pockets" and a long track record in the retail industry, could eventually break into this specialist's niche.

Who Should Care: With its current focus on the retail sector, prudsys is particularly interesting for European online and catalog retailers that are trying to improve channel effectiveness. The SaaS solution may be an option for retailers outside prudsys' current core market of Germany, Austria and Switzerland, as it doesn't require on-premises interaction with prudsys specialists. However, the Ireus service and support team is currently only available during Central European working hours. BI architects wanting to build process-driven analytic applications should monitor prudsys and similar companies to assess the viability of this type of real-time recommendation engine.

RECOMMENDED READING

"Emerging Technologies Will Drive Self-Service Business Intelligence"

"Business Activity Monitoring Architecture Evolution"

"The Rise of Data Discovery Tools"

This research is part of a set of related research pieces. See "Cool Vendors 2009: Changing Models and Changing Times" for an overview.

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