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Cool Vendors in Analytics and Business Intelligence, 2012

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The market for business intelligence and analytic applications is expanding in multiple directions. Here, we review five vendors that caught our attention as being cool.

Key Findings

- Easyask addresses natural language query and search, showing advancement in voice-controlled applications and expanding into mobile and e-commerce markets.

- Exxova offers a mobile business intelligence (BI) solution that uses advanced screen scraping to automatically convert BI applications (including those that are Flash based) for mobile consumption.

- First Retail extends the idea of data integration by adding structure to content through semantic matching, tagging and machine learning.

- Kaggle employs crowd sourcing techniques to help with the search for better algorithmic approaches to solving problems.

- Neutrino Concepts combines typed natural language query with visual discovery techniques to improve usability.

Recommendations

- Embrace the diversity of new BI and analytic applications that are coming to market, but deploy them in areas where the pace of change in operations and business models permits trial and error.

- Be mindful that innovative companies often change strategy and direction, so perform reference checks to validate claims and identify alternative solutions.

- Maintain an architectural view of data integration, BI, analytics and the processes that use them, so that the place for innovative tools is well understood.

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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

The market for BI and analytic applications continues to grow more active with innovative solutions that include natural language query, delivering analytics to mobile devices, building hybrid analytic solutions that integrate content and leveraging social techniques to build better algorithms. Buying centers are also expanding, as more business departments purchase software as a service (SaaS) and self-service solutions directly.

Selecting Cool Vendors in the analytics market this year was difficult. New providers of analytic solutions abound, especially in the popular areas of mobile, social, cloud and big data. We, as an industry, are building silos of analysis that will eventually have to be integrated, but the benefit of specialized analysis for problems that have not been addressed before outweighs most organizations' needs for a holistic view, at least for now.

The vendors here address a cross-section of popular topics for those involved in selecting analytic solutions. The popularity of Apple's Siri spilled over into picking EasyAsk. Exxova was chosen in the never-ending quest to easily deliver existing applications to mobile devices. First Retail represents the crowded market of content analytics, but it was its machine learning that caught our attention. Kaggle earned its coolness by working with Netflix to run a contest for a better movie recommendation algorithm. Neutrino made the list because of its linkage of visual techniques with advanced natural language query.

EasyAsk

Burlington, Massachusetts (www.easyask.com)

Analysis by Doug Laney

Why Cool: EasyAsk's embeddable platform and stand-alone natural language processing (NLP) products enable users to query and search using plain English (and other supported languages). With all the fervor around voice-activated applications and machine intelligence, EasyAsk can help end-user organizations and vendors put an Apple Siri-, Android Voice Actions-, Vlingo- or IBM Watson-like front end on their own BI or search applications. However, the EasyAsk NLP technology has been around in various forms for about two decades, so is already quite mature.

EasyAsk can provide a conversational experience, context awareness, an understanding of data meaning and relationships, auto-completion, suggestions, ambiguity resolution learning, sample questions and offers domain/language-specific packs. When stacked with partner Nuance (makers of DragonSoft Naturally Speaking) users can converse by voice with their data. As of this year, EasyAsk's Quiri product is now available for mobile platforms and to date, has been implemented on top of SAP and SugarCRM.

Challenges: The company has gone through several ownership and management changes over its protracted history, starting with AICorp and Trinzic in the 1990s, then re-formed and acquired by Progress Software the following decade and is now a recently private company once again. Additionally, EasyAsk has spent a lot of time and resources nibbling around the edges of niche markets. Early-on, the original NLP product (Intellect) was an adjunct to its flagship expert system development language (KBMS) and used for developing pre-BI decision support solutions.

More recently, EasyAsk's focus has been on e-commerce search enablement — reducing user time and effort to find catalog products. In this instantiation, EasyAsk has more than 300 e-retail customers.

However, Gartner believes there is a massive untapped market for EasyAsk in reducing BI users' laborious ad hoc query legerdemain. EasyAsk seems not to fully recognize the power of its technology's conversational, contextual and self-learning capabilities (even beyond those of Siri) that make it ideal for today's style of explorative analytics among masses of untrained users, not to mention executives.

Who Should Care: While online e-commerce businesses can and do benefit from EasyAsk in the form of improved user experience, reduced visitor abandonment and fuller shopping carts, Gartner thinks BI/analytics vendors and developers should sit up and take notice. We see that most BI platform vendors are busy trying to build a better slicing-and-dicing machine, yet ignoring the whole new user experience and wider user base that natural language query capabilities could open up for them. With the perfect storm of voice-enabled applications, mobile BI, cloud-based data/processing and analytic consumerization, EasyAsk could be the missing piece for many organizations.

Exxova

Alpharetta, Georgia (www.exxova.com)

Analysis by Andreas Bitterer

Why Cool: Exxova is a privately held company, founded in 2005, providing a mobile BI solution "with a twist."

The company's 500 (approximately) employees are located in Alpharetta, New York, and London and mostly at its offshore delivery center in Hyderabad, India.

Exxova has a different approach to bringing BI to mobile devices, a market that has seen enormous attention and many small software companies jumping on the bandwagon. Instead of the common rendering engine of many mobile BI vendors, the Exxova MyBI product is more of a "screen scraper on steroids" as it mobilizes virtually any kind of screen content (not just BI applications) with no re-platforming or redevelopment of the original content, thereby securing customers' investments in existing infrastructure. While the company's current focus is mobile BI, the product has the potential to expand into more transaction-oriented business applications in the future.

The MyBI middleware, consisting of the Mobile Application Server and the Mobile Application Gateway, is able to bring Flash-based content (including video and Flex), such as SAP BusinessObjects Dashboards (formerly known as Xcelsius) to devices such as the Apple iPad, which does not support Flash. At application back ends, Exxova at present supports Oracle Business Intelligence Enterprise Edition (OBIEE) and the SAP BusinessObjects product family (including WebIntelligence, Crystal Reports and the BEx Business Explorer), version 4.0 as well as older XI releases. Support for Microsoft, IBM Cognos and SAS is planned during the 2012 to 2013 time frame.

Currently, only Apple iOS and Google Android are supported front-end platforms, while Microsoft support is said to be in development and Research In Motion (RIM) is considered for future versions.

Exxova is aware that it needs to support virtually all authentication systems to provide appropriate security for its customers. Through the Mobile Administration Portal, users can create and maintain so-called security groups into which individual users can be added. Exxova supports systems such as Active Directory, LDAP, or SAP, defined as "Authentication Source" that must be passed through to gain access to any "Content Source."

The MyBI network of SaaS hubs, through which the mobile content is streamed, currently has four locations, California, Georgia, the U.K. and Singapore, but with growing demand, data centers are planned in Brazil, Australia, Japan, the Middle East and India.

Challenges: Exxova is participating in a very aggressive market segment (with lots of "small fish" as well as a few "sharks") on an acquisition trail. As such, Exxova will find itself constantly confronted with fierce competition and is also considered as a target for takeover. As a small company with a small marketing budget and small sales force, Exxova needs to be very focused on its market approach.

While the company's pipeline looks promising, with well-known global brands as prospects, the current customer base is at minimal level. Exxova's channel partner and OEM strategy looks promising, but is still largely under review.

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Who Should Care: BI leaders who want to quickly and non-intrusively mobilize their SAP BusinessObjects or Oracle BI applications for either Apple or Android devices should check out Exxova, particularly if they are struggling to get adoption of existing BI outputs. Firms with more than one BI platform standard may also view Exxova as a convenient way of providing commonality of experience on mobile devices across applications from different BI sources.

First Retail

Palo Alto, California (www.firstretail.com)

Analysis by David Newman

Why Cool: First Retail addresses the business challenge of how to sort through endless streams of structured and unstructured data and to recognize, classify and tag valuable content to meet the growing demand for effective online commerce solutions. The company's offerings combine aspects of computational linguistics (making sense from "unstructured" text), machine learning (matching and compensating for missing data), cloud computing (handling scalability and latency of consumer-facing Web applications), with a patent-pending semantic matching engine (integrating linguistics and machine learning).

First Retail targets retailers, aggregators and affiliate operators with the requirement to quickly ingest and update online catalogs and inventory to meet increasing customer needs for assortment and availability. In the age of "big" data, multichannel retailers face the challenge of dynamically processing different content types for online or mobile stores, making sense of that data and then fulfilling from vast vendor marketplaces — all at near real-time speeds. By improving content integration, First Retail makes Web-generated data more usable for automated downstream processes, analytics, personalization and process control.

Challenges: Given the hype and interest around big data, First Retail faces significant competition from established players in advanced analytics, machine learning and semantic interoperability. By maintaining a focus on a single sector (retail) the company can avoid spreading itself too thinly.

The company should re-think the use of the term "semantic marketspace" in its messaging, given the confusion about terms, such as Semantic Web. The stronger message is around linkability and the need by Web developers and solution architects for linked data and APIs that easily bring more relevant content into their applications. The company must decide if its target market is internal IT, the artificial intelligence community, or the better option, the next-generation Web developer.

Who Should Care: This vendor's offerings are of interest to enterprise architects, Web developers, information management specialists, e-commerce teams or other roles responsible for the strategies, architectures and solutions that integrate and make understandable the increasingly diverse sources of data that are outside the control of the enterprise.

First Retail will also appeal to marketing technologists looking for search engine optimization performance improvements. The ability to automatically tag unstructured content and classify content to available taxonomies without human intervention will improve the accuracy of search results.

Kaggle

San Francisco, California (www.kaggle.com)

Analysis by Rita Sallam

Why Cool: The use of pervasive, advanced analytics on increasing large and diverse data will become necessary for leading organizations that want to differentiate, innovate and gain competitive advantage. However, in most organizations, a lack of skills is the biggest barrier to success. Kaggle, a crowd sourcing competition platform for finding the best predictive analytics models, offers a solution to this problem.

Aspiring to be the "eBay of analytics," Kaggle is cool because it has turned advanced analytics on big data into a sport by offering a social network and competition forum that brings together companies with big data and advanced analytics problems with the brain power of the world's top 30,000 (and growing) data scientists. By doing so, it is making this scarce and often expensive expertise accessible and affordable to companies of any size.

After Netflix successfully held a $1 million contest to improve its algorithm for recommending movies, Kaggle was founded to help companies of any size run Netflix-like competitions. The customer supplies a dataset, tells Kaggle the question it wants answered and decides how much prize money it's willing to offer. Kaggle molds these inputs into a contest, where the data geeks of the world battle for intellectual supremacy bragging rights (and of course, the prize money). In exchange, Kaggle charges a fixed fee and monthly fee, or it takes a percentage of the prize money to set up and run the competition.

To date, its network of data scientist experts from around the globe have completed in more than 60 contests sponsored by companies such as Deloitte, Ford and Dunnhumby. The company says that its competitions have resulted in a 40% average improvement in benchmarks, compared to existing algorithms. For example, NASA and the Royal Astronomical Society are currently sponsoring a cosmological image analysis competition to develop an algorithm that can mathematically detect dark matter in the universe.

After only one week of competition, Martin O'Leary, a PhD student in glaciology, created an algorithm that outperformed algorithms most commonly used in astronomy for mapping dark matter, algorithms that NASA had been working on for 30 years (see "[Competition Shines Light on Dark Matter](#)").

Kaggle's largest competition to date with a $3 million in award prize is being run by Heritage Provider Network. The winner will be the person or team most accurately forecasting which patients will be admitted to a hospital within the next year (based on past insurance claim data).

Challenges: Kaggle's approach to applying the concept to analytics is unique, but poses some challenges. Most notably, to participate in contests, organizations have to supply the data, which is often very sensitive in nature. Providing open access to this data as part of a competition is not an option from many companies. Kaggle provides a solution to this problem by offering companies the option of a private competition in which it invites 10 to 15 of its most successful data scientist

extraordinaires (those with the highest rankings based on other competitions), who must sign non-disclosure agreements with the company to participate.

Moreover, data scientists are not exclusive to Kaggle, but only those data scientists previously competing successfully (data scientists are scored and ranked, as in competitive sport) in other Kaggle open competitions are invited to participate in the selective and prized private competitions. However, unlike the open competitions they will receive compensation regardless of whether or not they win.

Kaggle believes that by providing incentives to participate actively in analytic competitions it can create a robust market to attract the leading data scientists, which in turn, attracts the most competitions, giving data scientists the best opportunities to make money and earn bragging rights, which then attracts more data scientists.

Who Should Care: Whether you are a small organization without in-house advanced analytics expertise, or you are a large organization with internal skills, looking for ways to improve on existing algorithms, Kaggle may be an attractive option to build and/or enhance your company's advanced analytical capabilities. Running a competition is often less expensive than hiring a consulting firm and allows you to flexibly enhance or add to internal staff as needed. Additionally, Kaggle competitions have a track record for being able to achieve rapid benchmark-breaking results, often in weeks rather than months.

Neutrino Concepts

Birmingham, U.K. (www.neutrinobi.com)

Analysis by James Richardson

Why Cool: Neutrino is a search-based discovery tool, with which users explore structured data using natural language (for example, "sales of products by family type and yearly income") and create a battery of visualizations on the fly from those search terms. As such, it straddles the boundary between the two types of data discovery tool, visual and search driven, originally defined by Gartner in 2008 (see "The Rise of Data Discovery Tools").

Survey data shows that ease of use is the No. 1 buying criteria for BI tools in 2012 and Neutrino's free-form search requires little user training, as it's like using an Internet search string, which everyone can do. However, it's the amalgamation of search-based query and visualization with its data combination capabilities that makes Neutrino cool. The product offers the ability for end users to mash data together via a visually-driven integration interface. This visual integration approach allows for end users to select aspects (data series) from existing visuals, across multiple data sources, and combine these together. The user has full control of what is integrated and the NeutrinoBI server manages data lineage aspects (via pipelining) to keep things in step as the data changes. These user-defined charts can then be shared, reused and re-combined by other users in turn.

Finally, instead of trying to fight the use of Excel, or just use it as a BI UI, Neutrino has developed a closed loop with the spreadsheet, which allows data (sourced from an enterprise data warehouse,

for example), to be pushed into Excel and recalculated using formulas built by users, before being fed back into Neutrino. This gives the product the ability to take advantage of the burgeoning power of the Excel engine (including PowerPivot when it becomes part of Excel 2012) and make the most of existing Excel-based analytic assets.

Challenges: Competition — does the world need another BI tool, even one as appealing as Neutrino? The market is arguably more competitive now than it's ever been, with a group of well-established data discovery vendors (QlikView, Tableau and Tibco Spotfire, for example) already foremost in the minds of potential evaluators of Neutrino.

While a search UI is an attractive hook, Neutrino will have to work hard to differentiate itself with its small marketing budget and few references (as yet). In addition, Neutrino only works on structured data and people expect search tools to return results that reach across structured and less-structured information (like text) together, as evidenced in products like Oracle Endeca's Latitude offering, which could prove a stumbling block.

Who Should Care: Organizations looking for a means to improve the perceived ease of use of their BI portfolios (or ones where ad hoc query via a semantic model haven't been well adopted by users), should evaluate adding Neutrino to their analytic portfolio.

Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Emerging Technology Analysis: Mobile Business Intelligence"

"Emerging Technology Analysis: Visualization-Based Data Discovery Tools"

"Big Data Means Big Changes for Business Intelligence"

"BDBA: A Framework for Big Data Behavioral Analytics"

"Innovation Insight: Linked Data Drives Innovation Through Information-Sharing Network Effects"

"Finding Meaning in the Enterprise: A Semantic Web and Linked Data Primer"

This is part of a set of related research. See the following for an overview:

- Cool Vendors 2012: The Nexus Alters Business and Consumer Strategies

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