: What are Analytical Information Systems?

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Analytical Information Systems provide information, analysis and possibly recommendations.

Henry Morris, VP for Applications and Information Access at IDC, claims he coined the term "analytic applications" in 1997. In an article titled "Trends in Analytic Applications", published in DM Review in April 2001, Morris argues an analytic application must meet each of the following three conditions: 1) provide process support, it structures and automates a group of tasks pertaining to the review and optimization of business operations or the discovery and development of new business; 2) have separation of function, "the application can function independently of an organization's core transactional applications, yet it can be dependent on such applications for data and might send results back to these applications"; and 3) use time-oriented, integrated data from multiple sources.

Supposedly, three major types of analytic applications meet these criteria: Financial/Business Performance Management, Operations/Production, and Customer Relationship Management (CRM). Morris notes that for an analytical application "technical specialists build the simulation model using sophisticated tools. Decision-makers then apply the model, gauging the probable impact of a planned course of action." Also, Morris notes, "Analytic applications will co-exist with business intelligence tools." He also claims "Analytic applications are specialized, supporting a structured business process, while business intelligence tools are generic, supporting ad hoc user inquiries."

It seems we've been building analytic applications for a long time. The term analytic application seems to refer to a broad generic set of information systems that are generally model-driven decision support applications. There certainly are some decision support applications that focus on decision tasks other than those associated with supporting a structured business process. For example, DSS can support collaboration, communication and information retrieval. Morris also tells us the DSS that emphasize unplanned or ad hoc user inquiries are not analytic applications.

Despite the above clarification you may still wonder if analytic application is a useful or meaningful term. Maybe!! The way Morris defines it however seems overly broad and ambiguous. A quick mental review of Financial/Business Performance Management applications, Operations/Production applications, and Customer Relationship Management applications indicates to me that the conceptualization has some problems.

Syntell (http://www.syntell.com) claims to be the leader in analytical application packages. I won't evaluate that claim, but the folks at Syntell argue "Managers have used many technologies over the past 30 years to support their decision making process. Originally the emphasis was on making decisions based on reports of past performance. Then came the day of the Decision Support System which added a layer of control over what in particular the manager could see. Spread sheets became the rage when managers could use their personal models to interpret the raw data they were presented with to come up with the key indicators that they used to drive their decision process. Then OLAP tools became popular since they provided a spread sheet like environment but also allowed for higher degrees of delving into the layers of data." The people at Syntell see analytical applications as the next wave of Decision Support. Simulation may finally become a "hot" tool for business decision support.

In 2001, Information Technology Toolbox (ITtoolbox.com) announced a new online community for Business Intelligence. According to the press release, "Business Intelligence (BI) is a segment of information technology that comprises software systems that enable finding, storing, organizing and supplying data. By incorporating BI technology into an information system, a company has the ability to utilize real-time analysis of information." Business Intelligence sounds great but the term doesn't make much sense. How can and do technologies make a business or a manager intelligent? BI or "business intelligence" is my favorite IS/IT oxymoron. We're still struggling with the expectations of Decision Support Systems. Let's not make the problem worse by creating a SIG BI. It definitely seems preferable to discuss and study decision support and analytical information systems rather than "business intelligence".

Without a doubt we have major conceptual overlap problems related to terms associated with computerized decision support, we still have too much hype and terms that sound too good to be true. The term Analytical Information System seems like an appropriate term for software that supports real-time analysis of information on today's version of Charles Babbage's "analytical engine".

Analytical information includes production or output statistics, sales projections and trends, employee turnover and other summary information. The primary purpose of systems providing analytical information is supporting managers, staff and other people performing organizational and managerial analysis tasks.

In general, Analytical Information System is a descriptor for a broad set of information systems that assist managers in performing analyses, based on tools like dimensional analysis (OLAP), simulation, optimization, quantitative models and statistics. There are other decision support applications that focus on collaboration, communication, knowledge and document management and information retrieval.

What do you think? Do you use the phrase "analytic application"? Is it the "in" buzzword or another term to add confusion to the decision support lexicon? So are analytical or analytic applications and Analytical Information Systems only the latest buzzwords? **YES**.

Reference

Morris, H., "Trends in Analytic Applications", DM Review, April 2001.

The above response is based upon Power, D., What are Analytical Information Systems? DSS News, Vol. 2, No. 22, October 21, 2001, and Power, D., Are Decision Support Systems really analytic applications or are analytic applications really Decision Support Systems? DSS News, Vol. 2, No. 15, July 15, 2001. Last modified December 29, 2015.

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