What's New and Important in Business Intelligences

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Abstract. The roots of business intelligence date back to the early 1970s when decision support systems first emerged. Over the years, a variety of applications – executive information systems, online analytical processing, and dashboards – have been added to the family of decision support applications. In the early 1990s, "business intelligence" was coined as an umbrella term to describe these analytical applications.

Business intelligence (BI) can be defined as a broad category of applications, technologies, and processes for gathering, storing, accessing, and analyzing data to help business users make better decisions. Organizations use BI in a variety of ways – as a single or a few related applications, an enterprise-wide capability, or an enabler of organizational transformation to support a new business model.

BI continues to evolve and there are many new, interesting developments. One trend is the increased scalability of BI – more data, users, and complex queries. An example of this is, "pay as you drive," an alternative insurance pricing model used in a few companies such as Norwich Union where the cost of insurance is based on when, where, how, and how much you drive.

Another trend is pervasive BI, which gives BI to more employees, suppliers, and customers. There are many challenges to pervasive BI – time, cost, training, and the difficulty of using many BI tools – but progress is being made. One of the most interesting approaches is the use of "Google-like" natural language search.

Until recently, decision support focused on the off line analysis of historical data. Now, real-time data is being used to affect current operations. The use of real time data reduces data, analysis, and decision latency, and represents a new generation in decision support data management. A powerful example of operational BI is Continental Airlines, which is using real time data for revenue management, customer relationship management, flight operations, crew operations and union negotiations, and security and fraud.

Companies are using BI as an integral component of how they compete in the marketplace. For example, companies like First American Corporation and Harrah's Entertainment have business strategies that are dependant on BI. Overstock.com uses BI for customer profitability analysis, customer segmentation analysis, pricing, product recommendations, and demand forecasting. Information is replacing physical assets.

The Teradata University Network (TUN) is a great resource for faculty and students with interests in BI/DSS, data warehousing, and database. It is a free portal (www.teradatauniversitynetwork.com) that provides articles, cases, assignments, projects, software, web seminars, and more. Over 2,000 faculty members, in over 900 universities, and in 69 countries use TUN. Entire courses are taught using this resource.