Introduction to the Minitrack on Data Warehousing and Business Intelligence

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A shift is occurring in the area of data warehousing whereby organizations are increasingly focused on the actionable business knowledge that can be derived from integrated data infrastructures. Organizations are demanding business intelligence strategies that include efficiently sourcing and storing data, and then making that data available to business processes in ways to improve performance and reduce costs. Researchers and practitioners need to understand both facets of warehousing – extracting, transforming, and storing data (i.e., getting data in) as well as data access (i.e., getting data out).

Many of the traditional problems with data warehousing (e.g., data quality, performance tuning) still exist; however, new issues, such as process integration and latency strategies are accompanying the growing interest in trends, such as performance management and tactical decision support.

The papers in this year's Data Warehousing and Business Intelligence Minitrack investigate managerial and technical issues in creating and managing an effective business intelligence strategy. They offer insights that may help researchers and practitioners better understand and manage both old and new concerns with business intelligence environments.

In "Trends and Practices in Data Warehousing from a Business Perspective," Jeff Lawyer and Shamsul Chowdury present a case study of data warehousing at a large U.S. retailer. They describe best practices and challenges that the retailer faced as they implemented their business intelligence environment. The authors also explain the benefits that the company realized once the data warehouse was put in place. For example, the warehouse helped the company strengthen its customer orientation and business partnerships.

Claire Simmers explores the role of business intelligence in networked organizations by taking a stakeholder perspective in "A Stakeholder Model for Business Intelligence." The paper demonstrates how business intelligence can meet the needs of a new kind of organizational structure. Simmers demonstrates that stakeholder theory provides a useful theoretical base for understanding business intelligence as a way to manage knowledge, and she develops propositions to help guide research and practice in the area.

The third study in this minitrack focuses on the technical concern of managing on-line analytical processing (OLAP) queries. Frank Dehne and Todd Eavis investigate sequential and parallel methods for building subsets of data views for OLAP data cubes in their paper, "Top-Down Computation of Partial ROLAP Data Cubes." The authors explain that building complete data cubes often is unnecessary and resource-intensive; therefore, a method to determine how to build subsets of data cubes is needed. They test their techniques using an experimental design and show linear improvements with partial cube construction when compared to the construction of complete data cubes.

It is challenging for academics to stay abreast of changes to teach and research effectively in data warehousing and business intelligence. We encourage instructors who have an interest in these areas to investigate Teradata University Network, sponsored by Teradata, a division of NCR. Teradata University Network is a free, comprehensive on-line educational resource for academics worldwide who teach data warehousing, DSS/business intelligence, and database classes. Members share ideas, experiences and resources within this community that includes course syllabi, software, web sites, book chapters, articles, research reports, assignments, and PowerPoint presentations. You can learn more at www.TeradataUniversityNetwork.com.

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