

What's New and Important in Business Intelligence

ITI 2009 Keynote Address

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Presentation Topics

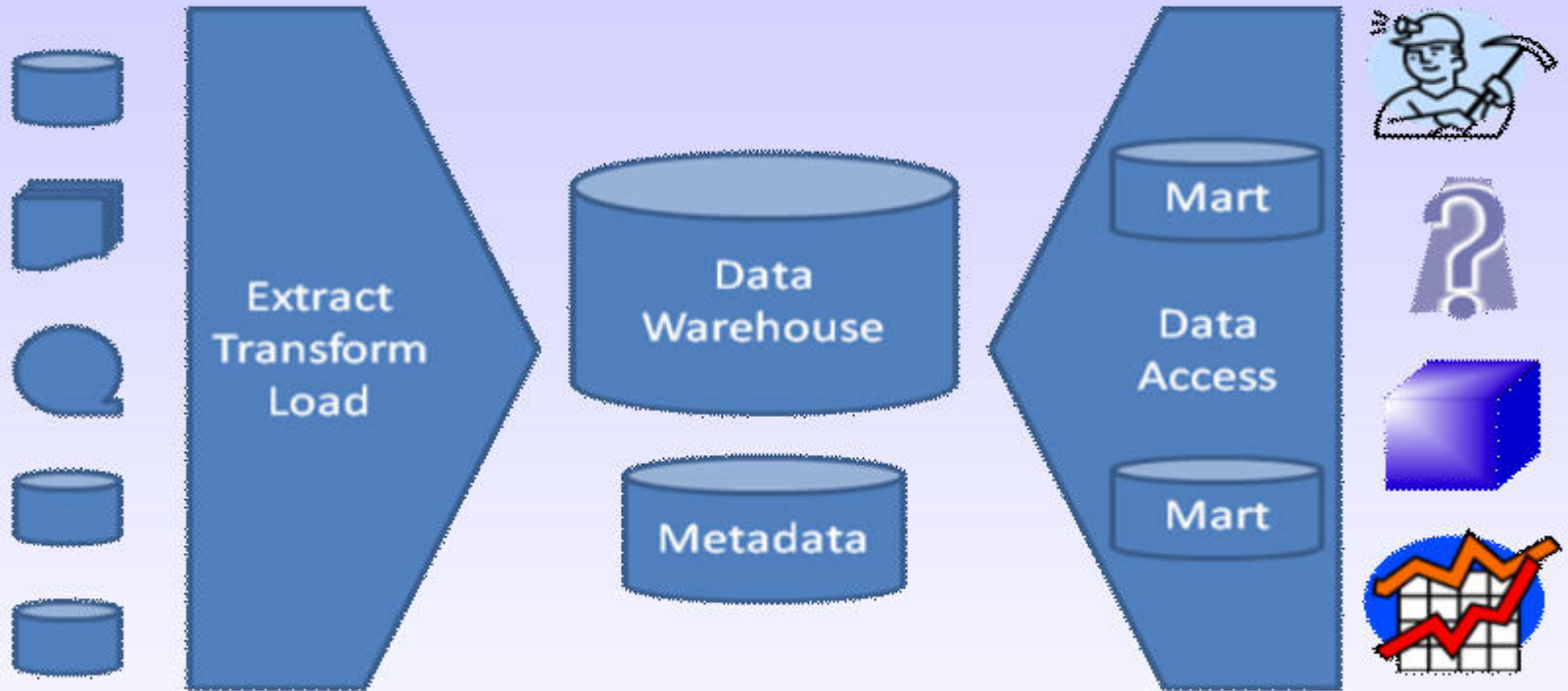
- *Basic concepts*
- *Trend #1: Scalability*
- *Trend #2: Pervasive BI*
- *Trend #3: Operational BI*
- *Trend #4: The BI Based Organization*
- *The Teradata University Network*

What Is Business Intelligence?

- Its roots go back to the early 1970s
- The progression includes DSS, EIS, OLAP, and dashboards/scorecards
- Howard Dresner, a Gartner analyst, coined the BI term in the early 1990s
- There are many BI definitions

Business intelligence (BI) is a broad category of applications, technologies, and processes for gathering, storing, accessing, and analyzing data to help business users make better decisions.

Business Intelligence Framework



BI Targets

- A point solution – a single or a few related applications
- Enterprise-wide BI – providing organizational BI infrastructure
- BI to support organizational transformation – enabling a new business model

So What's New in BI?

Pervasive BI

BPM

Data
Appliances

BI in the
Cloud

Mobile
BI

Predictive
Analytics

Real Time
BI

Columnar
Databases

BI Based
Organization

BI Governance

Advanced Data
Visualization

SaaS

Scalability

In-Memory
Analytics

Rules Engines

BI 2.0
Software

BI Competency Centers

BI Gadgets

BI Search

MS Office
Integration

Open Source
BI Software

Master Data
Management

Event
Analytics

Text
Analytics

Operational BI

Trend #1: Scalability

- The technology is emerging to support
 - ✓ much more data
 - ✓ many more users
 - ✓ much more complex queries

Pay as You Drive

- An alternative insurance model
- Employs a black box in the car
- Data is sent on when, where, how, and how much you drive
- Predictive analytics is used to determine how much to charge for insurance



Trend #2: Pervasive BI

- The goal is to have more people use BI
 - ✓ Employees
 - ✓ Suppliers and customers
- There is still work to do
 - ✓ A 2008 TDWI study found that only 24% of BI users with a license use the tool at least once a week
 - ✓ This up from 18%, however, in 2005

Pervasive BI

- There are challenges to pervasive BI
 - ✓ The time, cost, and complexity of deployment
 - ✓ The time and cost of user training and support
 - ✓ The difficulty of using BI tools

Pervasive BI

- There are several possible solution approaches
 - ✓ Web based applications
 - ✓ Integrating BI with Microsoft Office
 - ✓ Implementing dashboards and scorecards
 - ✓ Embedding BI into business processes
 - ✓ Making BI tools easier to use

Pervasive BI

- One way to make BI tools easier to use is to make them more “Google like”
 - ✓ Familiar
 - ✓ Intuitive
- Finding needed information is a major challenge
- EasyAsk provides a natural language search capability (www.easyask.com)

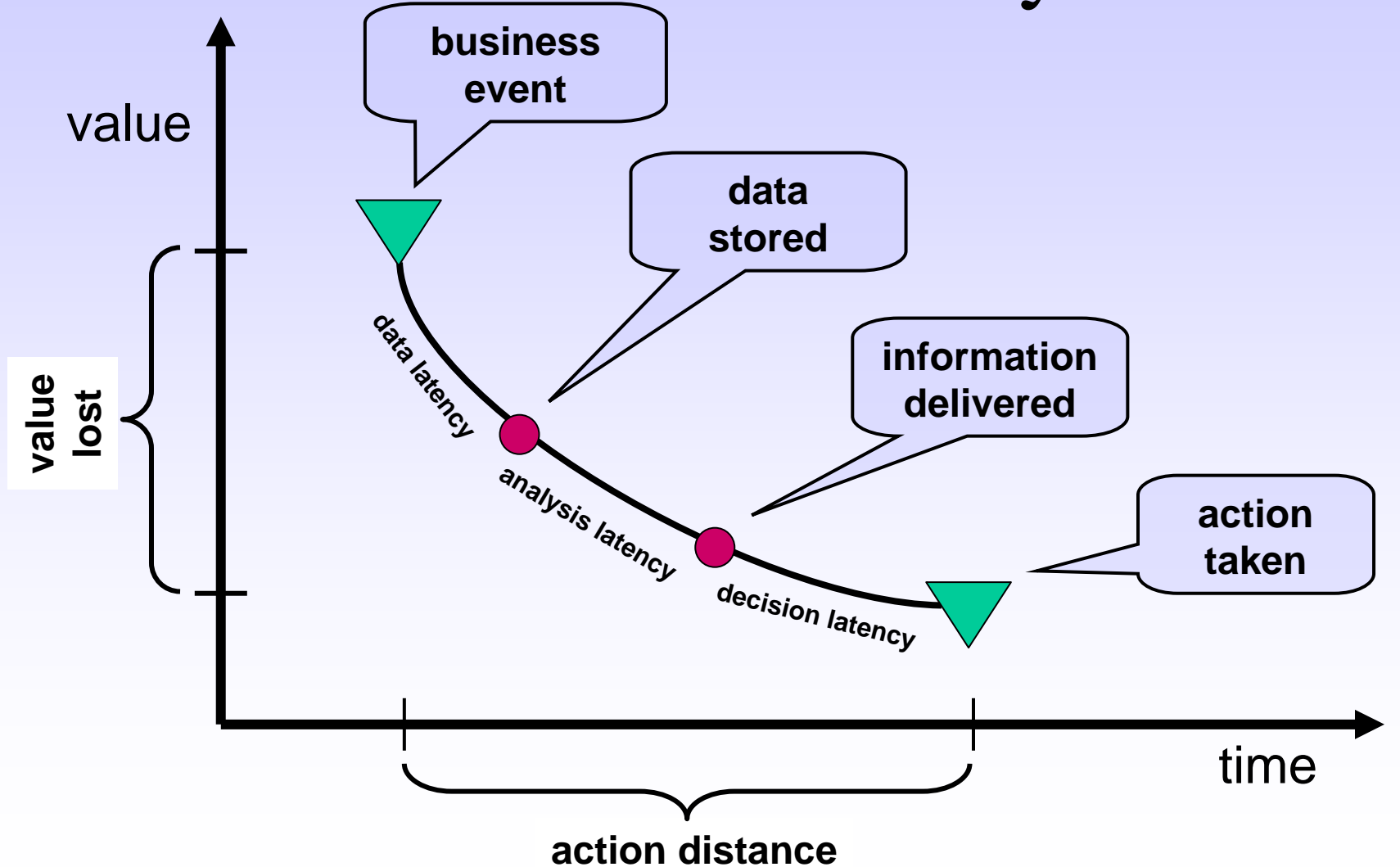
Trend #3: Operational BI

- Until recently, BI has focused on the off line analysis of historical data
- More recently, BI is using the analysis of real time data to affect current operations
- This evolution can be considered in terms of three generations of decision support data management

BI Data Management: Three Generations

- First Generation – DSS and separate decision support databases
- Second Generation – Traditional data warehousing with support for enterprise-wide applications
- Third Generation – Real time data warehousing

Value versus Latency



Source: Richard Hackathorn

Real Time BI at Continental Airlines

- The business strategy was to be the best customers favorite airline
- To accomplish this, the warehouse had to provide real time, actionable information to support operational decision making and business processes
- In 2001, Continental went to real time data warehousing



Real Time BI at Continental Airlines

- Became customer rather than product focused
- Developed a rich set of real time applications



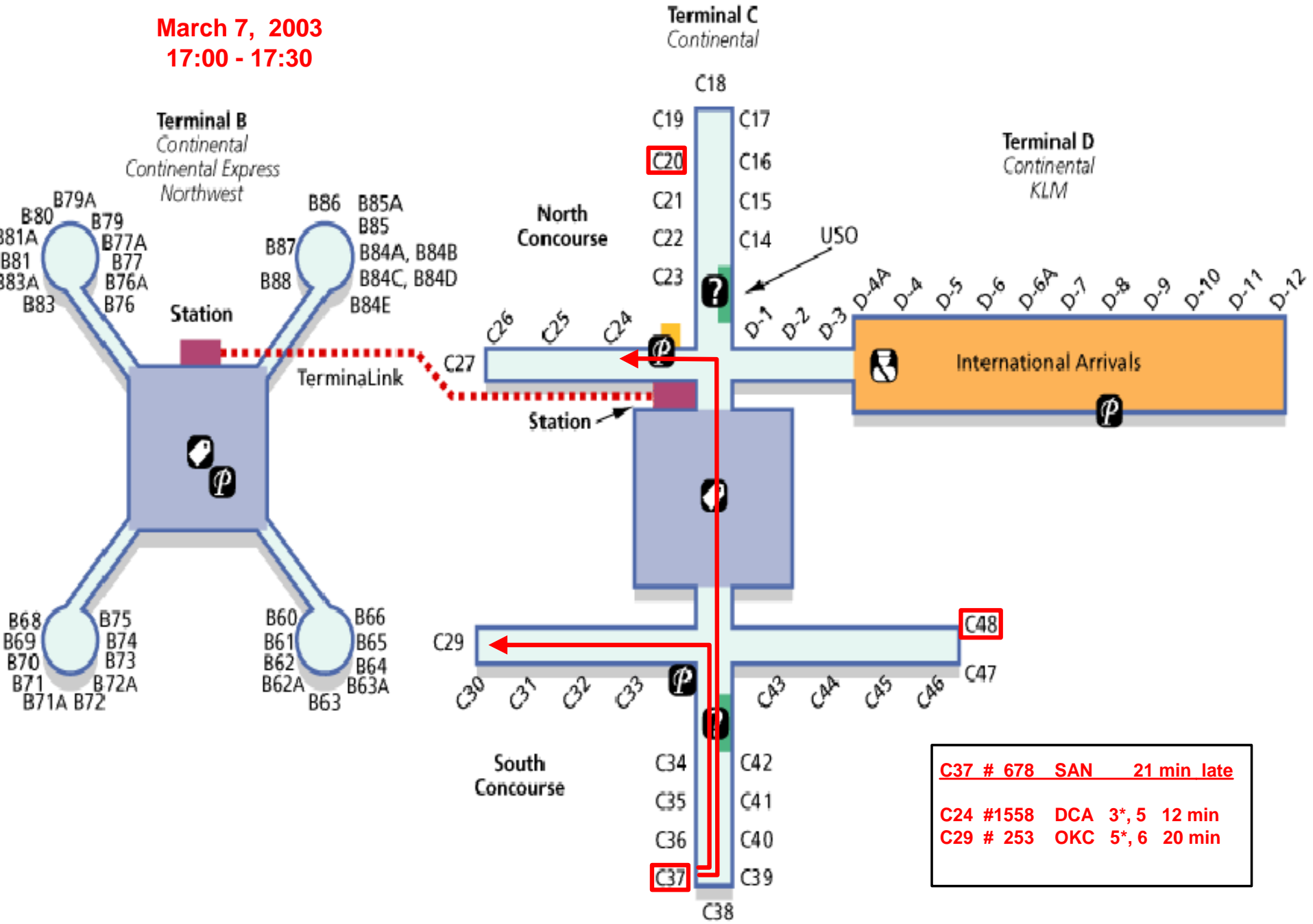
Applications Include ...

- Revenue management and accounting
- Customer relationship management
- Flight operations
- Crew operations and union negotiations
- Security and fraud

Flight Operations

- The Flight Management Dashboard tracks all flights and monitors for delays
- The Flight Management Dashboard helps provide exceptional service to Continental's best customers
- Real time flight statistics are available
- More informed and faster reactions to flight irregularities

March 7, 2003
17:00 - 17:30



C37 # 678	SAN	21 min late
C24 #1558	DCA	3*, 5 12 min
C29 # 253	OKC	5*, 6 20 min

Trend #4: The BI Based Organization

- Its ability to compete in the marketplace is dependent on BI
- Extreme examples include First American Corporation and Harrah's Entertainment
- Overstock.com, an online retailer, is using BI to run the company

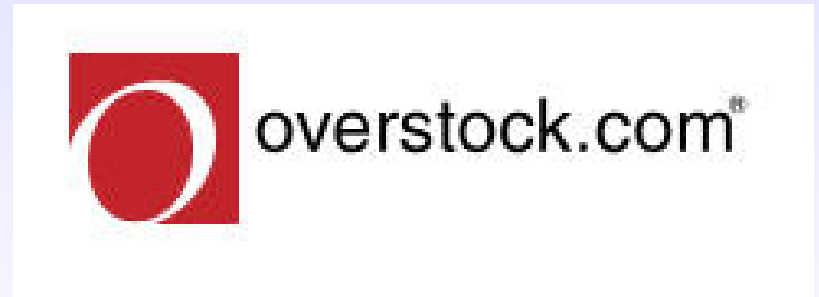
BI at Overstock.com

- One of the top five online retailers
- CEO, Patrick Byrne, calls it “a business intelligence company”









BI Applications Include ...

- Customer profitability analysis
- Customer segmentation analysis
- Product recommendations
- Pricing
- Forecasting
- Dashboards



Overstock.com

Furniture Living Room Bedroom Dining Room Patio Bar Home Office All 	Home Area Rugs Decor Kitchen Bath Housewares Improvement Tools Automotive All 	Bedding Memory Foam Mattresses Sheets Comforters Blankets Down Bedding Duvet Covers Pillows All 	Clothing Women's Men's Junior's Children's Shoes Handbags Sunglasses Accessories Designer Store All 	Jewelry Rings Necklaces Earrings Bracelets Fashion Jewelry Wedding Men's All 	Watches Men's Women's Children's Luxury Watches Watchbands Watch Winders Watch Boxes All 	Electronics Televisions Computers Cameras iPods & MP3 GPS DVD Players Audio & Video Cell Phones PDAs All 	Sports Golf Fitness Water Sports Camping Cycling Hunting Indoor Games Collectibles All 	Books etc. Books Movies Music Video Games Software Magazines All 	Worldstock Home Living Furniture Area Rugs Bedding Clothing & Shoes Jewelry All 	Other Luggage Health & Beauty Gifts & Flowers Crafts & Sewing Office Auto Parts Baby Pets Toys Wholesale Father's Day Gift Ideas 
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Chaise](#)

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Overstock.com Is in the Information Business

- Is substituting information for physical assets
- Who does the CEO most fear as a competitor?

Teradata University Network

- A free resource for faculty and students interested in BI, data warehousing, and database
- Currently has over 2,000 faculty users, in over 900 universities, and in 69 countries
- Register at www.teradatauniversitynetwork.com

Course Types	Content Types	Software	Teradata Resources	Community	Student Employment
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Welcome, Hugh
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Teradata University Network

A Premier Resource for Data Warehousing, DSS/BI and Database

Quick Links
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-> Teradata SQL Assistant Trial
-> Related Web Sites
-> Browser & Display Settings
-> Quick Start Guides
-> Report Problems / Provide Feedback

Latest News
-> Newsletter from March 2009
-> Newsletter from December 2008
-> Be sure to read the new IDC report entitled *Taming Information Chaos*, which reveals how industry leaders worldwide are successfully leveraging vital business intelligence (BI) by utilizing the right combination of business analytics software.
-> From January 1, 2009 through June 30, 2009, the PASSWORD for the Teradata Student Network web site will remain: SmartDecisions (not case sensitive).

News Item! With the upcoming July 1, 2009 migration of Teradata University Network to a new look and increased functionality we are requesting that any **new content submissions must be received by April 15th**. Any content submitted after that date will be incorporated into the new site and available in July.

Course Types
-> Data Warehousing
-> Database
-> DSS/BI

NEW! SQL Assistant Trial
Teradata University Network is excited to announce a new tool - SQL Assistant Trial. From the link below you can try Teradata SQL Assistant/Web Edition. It automatically creates a SQL account and grants access to a database and logs you into SQL Assistant. This trial is for academics and students to run queries against one data set. Click on the link below to see more details. [Teradata SQL Assistant/Web Edition Trial](#)

Content Types
-> Articles
-> Assignments
-> Book Chapters
-> Case Studies
-> Course Web Sites
-> Integrated Materials
-> Podcasts
-> PowerPoint Presentations
-> Projects
-> Research Reports
-> Student Work
-> Syllabi
-> Tutorials
-> Web Seminars
-> White Papers

Teaching Database and Data Warehousing Tutorial: The Teradata SQL Assistant Advantage for Your Students — This audio and visual tutorial explains the benefits and use of Teradata SQL Assistant/Web Edition on both Teradata University Network and Teradata Student Network. The tutorial shows how to navigate the SQL Assistant user interface, how to enter/edit/save/recall queries, how to access a database's data dictionary and how to access help and documentation about SQL Assistant/Web Edition. Overall, the tutorial demonstrates how SQL Assistant provides a more powerful and easier-to-use hands-on environment for your students to learn SQL and database management.

Full version
Tutorial-only

New Content Highlights
-> Tableau Data Visualization Software Added to Software Download Menu
-> Using Teradata University Network (TUN), a Free Internet Resource for Teaching and Learning - Robert Winter, Anke Gericke and Tobias Bucher, Educational Technology & Society, Volume 11, Issue 4, 2008
-> Teradata University Network: A No Cost Web Portal for Teaching Database, Data Warehousing, and Data-Related Subjects - Nenad Jukic and Paul Gray, Journal of Information Systems Education, Volume 19, Number 4 (2008) pp. 395-402
-> Designing the Star Schema Database - Utley, C. Designing the Star Schema Database. CIO Briefings.com
-> What is Data Mining? - Assignment - Ariyachandra, T., What is Data Mining, October 2008
-> Mike Goul, Director of Information Systems for the W.P. Carey School of Business at Arizona State University - podcast
-> Barb Wixom, Associate Professor for the McIntire School of Commerce at the University of Virginia - podcast
-> PARTNERS 2008: Nationwide insurance - video
-> Best Practices in Active Loading: Real-time Data Loading Tips and Techniques - Mayrack, J. Best Practices in Active Loading: Real-time Data Loading Tips and Techniques. September. TeradataMagazine.com, September 2008, 63-65.
-> What Is Data Mining? - web seminar

Course Types
Find specific source material on data warehousing, DSS/BI and database. Check out articles, assignments, book chapters, case studies, PowerPoint presentations, research reports, course syllabi and web seminars. Search by Course Types and then filter your results by Content Types, or vice versa.

Teradata University Network

- Resources include articles, tutorials, case studies, PowerPoint presentations, assignments, web seminars, course syllabi, and software
- Students register at a companion site, the Teradata Student Network, www.teradatauniversitynetwork.com

