The Kimball Group Reader

Relentlessly Practical Tools for Data Warehousing and Business Intelligence

Remastered Collection

Ralph Kimball and Margy Ross with Bob Becker, Joy Mundy, and Warren Thornthwaite

WILEY

Article Index

The 34 Subsystems of ETL (Ralph Kimball, *Intelligent Enterprise*, Dec 4, 2004), 500–504

Α

- Accumulating Snapshots for Complex Workflows (Margy Ross, *Design Tip #130*, Dec 1, 2010), 324–326
- Accurate Counting with a Dimensional Supplement (Warren Thornthwaite, *Design Tip #12*, Aug 27, 2000), 361–363
- Add Uncertainty to Your Fact Table (Ralph Kimball, *Design Tip #116*, Sep 2, 2009), 559–560
- Adding a Mini-Dimension to a Bridge Table (Ralph Kimball, *Design Tip #136*, Jun 28, 2011), 407–409
- Adding an Audit Dimension to Track Lineage and Confidence (Ralph Kimball, *Design Tip #26*, Aug 1, 2001), 556–558
- Adjust Your Thinking for SANs (Ralph Kimball, *Intelligent Enterprise*, Mar 8, 2001), 726–728
- Aggregate Navigation with (Almost) No Metadata (Ralph Kimball, *DBMS*, Aug 1996), 690–697
- The Aggregate Navigator (Ralph Kimball, *DBMS*, Nov 1995), 686–689
- Alan Alda's Interviewing Tips for Uncovering Business Requirements (Margy Ross, *Intelligent Enterprise*, May 1, 2005), 123–127
- Alternate Hierarchies (Warren Thornthwaite, *Design Tip #62*, Dec 7, 2004), 426–427
- Alternatives for Multi-Valued Dimensions (Joy Mundy, *Design Tip #124*, Jun 2, 2010), 405–407
- Another Look at Degenerate Dimensions (Bob Becker, *Design Tip #46*, Jun 4, 2003), 312–313
- The Anti-Architect (*Intelligent Enterprise*, Jan 14, 2002), 112–115
- An Architecture for Data Quality (Ralph Kimball, DM Review, Oct 2007), 545–553

- Are IT Procedures Beneficial to DW/BI Projects (Joy Mundy, *Design Tip #129*, Nov 3, 2010), 98–100
- Avoid Isolating DW and BI Teams (Margy Ross, *Design Tip #64*, Feb 8, 2005), 90
- Avoiding Alternate Organization Hierarchies (Joy Mundy, *Design Tip #114*, Jul 8, 2009), 425–426

В

- Backward in Time (Ralph Kimball, *Intelligent Enterprise*, Sep 29, 2000), 587–590
- Balancing Requirements and Realities (Margy Ross, *Design Tip #125*, Jun 30, 2010), 129–130
- Behavior: The Next Marquee Application (Ralph Kimball, *Intelligent Enterprise*, Apr 16, 2002), 740–742
- Being Offline as Little as Possible (Ralph Kimball, *Design Tip #27*, Apr 1, 2001), 605–606
- Better Business Skills for BI and Data Warehouse Professionals (Warren Thornthwaite, *Intelligent Enterprise*, May 11, 2008), 91–93
- Beware the Objection Removers (Ralph Kimball, *Intelligent Enterprise*, Sep 1, 2005), 82–86
- Beyond Paving the Cow Paths (Bill Schmarzo, *Intelligent Enterprise*, Nov 18, 2003), 733–736
- BI Components for Business Value (Warren Thornthwaite, *Design Tip #151*, Jan 8, 2013), 736–738
- The BI Portal (Warren Thornthwaite, *Design Tip #58*, Aug 26, 2004), 757–759
- Big Shifts Happening in BI (Ralph Kimball, *Design Tip* #60, Oct 8, 2004), 738–740
- Boosting Business Acceptance (Bob Becker, *Intelligent Enterprise*, Aug 7, 2004), 822–825
- The Bottom-Up Misnomer (Margy Ross, *Intelligent Enterprise*, Sep 17, 2003), 140–143

- Brace for Incoming (Warren Thornthwaite, Intelligent Enterprise, Aug 31, 2001), 527-530
- Brave New Requirements for Data Warehousing (Ralph Kimball, Intelligent Enterprise, Oct 1998), 47-52
- Bringing Up Supermarts (Ralph Kimball, DBMS, Jan 1998), 40–47
- The Budgeting Chain (Ralph Kimball, Intelligent Enterprise, Jun 1, 1999), 471–475
- Build a Ready-to-Go Resource for Enterprise Dimensions (Ralph Kimball, Design Tip #163, Feb 5, 2014), 185–186
- Building a Change Data Capture System (Ralph Kimball, Design Tip #63, Jan 11, 2005), 530-531
- Building a Foundation for Smart Applications (Joy Mundy, Intelligent Enterprise, Dec 1, 2006), 632-637
- Building and Delivering BI Reports (Warren Thornthwaite, Intelligent Enterprise, Apr 1, 2006),
- Building Bridges (Warren Thornthwaite, Design Tip #142, Feb 1, 2012), 601-604
- Building Custom Tools for the DW/BI System (Joy Mundy, Design Tip #94, Sep 4, 2007), 625-626
- Business Process Decoder Ring (Bob Becker, Design Tip #72, Oct 7, 2005), 137–138

C

- Call to Action for ETL Tool Providers (Warren Thornthwaite, Design Tip #122, Apr 7, 2010), 521-522
- Can the Data Warehouse Benefit from SOA? (Ralph Kimball, Design Tip #106, Oct 10, 2008), 617-619
- Catastrophic Failure (Ralph Kimball, Intelligent Enterprise, Nov 12, 2001), 716–719
- Causal (Not Casual) Dimensions (Ralph Kimball, DBMS, Nov 1996), 356-359
- Clicking with Your Customer (Ralph Kimball, Intelligent Enterprise, Jan 5, 1999), 477–482
- Columnar Databases: Game Changers for DW/BI Deployment (Ralph Kimball, Design Tip #121, Mar 3, 2010), 672–673
- Combining Periodic and Accumulating Snapshots (Ralph Kimball, Design Tip #42, Jan 7, 2003), 282-284
- Complementary Fact Table Types (Bob Becker, Design Tip #167, Jun 17, 2014), 284-286
- Complementing 3NF EDWs with Dimensional Presentation Areas (Bob Becker, Design Tip #148, Aug 1, 2012), 201-202

- Compliance-Enabled Data Warehouses (Ralph Kimball, Design Tip #74, Dec 16, 2005), 475–477
- Conformed Dimensions as the Foundation for Agile Data Warehousing (Margy Ross, Design Tip #135, Jun 1, 2011), 180–181
- Contain DW/BI Scope Creep and Avoid Scope Theft (Bob Becker, Design Tip #154, Apr 1, 2013), 96-98
- Coping with Growing Pains (Joy Mundy, Intelligent Enterprise, May 1, 2004), 812-815
- Coping with the Brave New Requirements (Ralph Kimball, Intelligent Enterprise, Nov 1998), 52–57
- Creating, Using, and Maintaining Junk Dimensions (Warren Thornthwaite, Design Tip #113, Jun 3, 2009), 599-601
- Creating a Reference Dimension for Infrequently Accessed Degenerates (Bob Becker, Design Tip #86, Dec 15, 2006), 313-314
- Creating and Managing Mini-Dimensions (Warren Thornthwaite, Design Tip #127, Sep 1, 2010), 597-599
- Creating and Managing Shrunken Dimensions (Warren Thornthwaite, Design Tip #137, Aug 2, 2011), 595-597
- Creating Historical Dimension Rows (Warren Thornthwaite, Design Tip #112, May 5, 2009), 582-585
- Creating the Advantages of a 64-Bit Server (Joy Mundy, Design Tip #76, Feb 9, 2006), 722-723
- Creating the Metadata Strategy (Warren Thornthwaite, Design Tip #75, Jan 13, 2006), 708-709

D

- Dangerous Preconceptions (Ralph Kimball, DBMS, Aug 1996), 226–228
- Dashboards Done Right (Margy Ross, Design Tip #88, Feb 21, 2007), 759-760
- Data Stewardship 101: The First Step to Quality and Consistency (Bob Becker, Intelligent Enterprise, Jun 2006), 186–189
- Data Warehouse Checkups (Margy Ross, Intelligent Enterprise, Jun 12, 2004), 816-822
- Data Warehouse Dining Experience (Margy Ross, Intelligent Enterprise, Jan 1, 2004), 67–70
- Data Warehouse Role Models (Ralph Kimball, DBMS, Aug 1997), 347-350
- Data Warehouse Testing Recommendations (Joy Mundy, Design Tip #134, May 4, 2011), 537–539
- A Data Warehousing Fitness Program for Lean Times (Bob Becker and Joy Mundy, Intelligent Enterprise, Mar 16, 2009), 835-839

- Data Wrangling (Ralph Kimball, DM Review, Jan 2008), 6-8
- The Database Market Splits (Ralph Kimball, DBMS, Sept 1995), 37-39
- Dealing with Data Quality: Don't Just Sit There, Do Something! (Warren Thornthwaite, Design Tip #117, Sep 30, 2009), 535-537
- Dealing with Dirty Data (Ralph Kimball, DBMS, Sep 1996), 539-545
- Dealing with Nulls in a Dimensional Model (Warren Thornthwaite, Design Tip #43, Feb 6, 2003), 317-318
- Declaring the Grain (Ralph Kimball, Intelligent Enterprise, Mar 1, 2003), 267-270
- De-Clutter with Junk Dimensions (Bob Becker, Design Tip #48, Aug 7, 2003), 353–354
- Design Constraints and Unavoidable Realities (Ralph Kimball, Intelligent Enterprise, Sep 3, 2002), 60-64
- Design Review Dos and Don'ts (Margy Ross, Design Tip #120, Feb 2, 2010), 255-257
- Designing the User Interface (Ralph Kimball, Intelligent Enterprise, Sep 14, 1999), 700-704
- Differences of Opinion (Margy Ross, Intelligent Enterprise, Mar 6, 2004), 193-198
- Digging into Data Mining (Ralph Kimball, DBMS, Oct 1997), 764-766
- Digital Preservation (Ralph Kimball, Intelligent Enterprise, Mar 1, 2000), 719-722
- Dimension Embellishments (Bob Becker, Design Tip #53, Mar 24, 2004), 427–429
- Dimension Row Change Reason Attributes (Warren Thornthwaite, Design Tip #80, Jun 1, 2006), 382-383
- A Dimensional Modeling Manifesto (Ralph Kimball, DBMS, Aug 1997), 151-159
- Dimensional Relational versus OLAP: The Final Deployment Conundrum (Ralph Kimball, Intelligent Enterprise, Apr 27, 2007), 679-682
- Disruptive ETL Changes (Ralph Kimball, Design Tip #126, Aug 3, 2010), 531–533
- Divide and Conquer (Ralph Kimball, Intelligent Enterprise, Oct 30, 2002), 163-166
- Dividing the World (Ralph Kimball, DM Review, Mar 2008), 10-13
- Document the ETL System (Joy Mundy, Design Tip #65, Mar 8, 2005), 522–523
- Does Your Organization Need an Analytic Sandbox? (Bob Becker, Design Tip #174, May 6, 2015), 779-781
- Doing the Work at Extract Time (Ralph Kimball, Intelligent Enterprise, Feb 21, 2002), 510-513

- Don't be Overly Reliant on Your Data Access Tool's Metadata (Bob Becker, Design Tip #44, Mar 14, 2003), 760–762
- Don't Forget the Owner's Manual (Joy Mundy, Intelligent Enterprise, Jul 1, 2005), 805–809
- Don't Support Business Intelligence with a Normalized EDW (Design Tip #34, Feb 28, 2002), 199–201
- Drill Down into a Detailed Bus Matrix (Margy Ross, Design Tip #41, Nov 6, 2002), 174–176
- Drill Down to Ask Why (Ralph Kimball, DM Review, July 2008 and Aug 2008), 22-24
- Drilling Down, Up, and Across (Ralph Kimball, DBMS, Mar 1996), 207-210
- Durable "Super-Natural" Keys (Warren Thornthwaite, Design Tip #147, Jul 10, 2012), 333-334

Ε

- Early-Arriving Facts (Ralph Kimball, Design Tip #57, Aug 2, 2004), 590-591
- Easier Approaches for Harder Problems (Ralph Kimball, Design Tip #131, Feb 3, 2011), 70–72
- Educate Management to Sustain DW/BI Success (Warren Thornthwaite, Intelligent Enterprise, Aug 27, 2007), 825–828
- Eight Guidelines for Low Risk Enterprise Data Warehousing (Ralph Kimball, Intelligent Enterprise, Apr 26, 2009), 118-121
- Eight Recommendations for International Data Quality (Ralph Kimball, Intelligent Enterprise, Aug 1, 2008), 565-568
- Enabling Market Basket Analysis (Ralph Kimball, Intelligent Enterprise, Apr 20, 1999), 489–493
- An Engineer's View (Ralph Kimball, Intelligent Enterprise, Jul 26, 2002), 78-82
- Enjoy the Sunset (Bob Becker, Design Tip #143, Mar 1, 2012), 839-840
- ERP Vendors: Bring Down Those Walls (Ralph Kimball, Intelligent Enterprise, Jun 26, 2000), 629-632
- Essential Steps for the Integrated Enterprise Data Warehouse (Ralph Kimball, DM Review, Apr 2008 and May 2008), 13-22
- The Evolving Role of the Enterprise Data Warehouse in the Era of Big Data Analytics (Ralph Kimball, White Paper Excerpt, Apr 29, 2011), 641–659
- An Excel Macro for Drilling Across (Ralph Kimball, Design Tip #156, Jun 2, 2013), 783-785
- Expanding Boundaries of the Data Warehouse (Ralph Kimball, Design Tip #141, Dec 6, 2011), 72–73
- Exploit Your Fact Tables (Ralph Kimball, DM Review, Jan/Feb 2009), 33-34

Extreme Status Tracking for Real-Time Customer Analysis (Ralph Kimball, Intelligent Enterprise, Jun 21, 2010), 435–439

F

- Fables and Facts (Margy Ross, Intelligent Enterprise, Oct 16, 2004), 228–232
- Facing the Re-Keying Crisis (Joy Mundy, Design Tip #149, Oct 2, 2012), 585-587
- Fact Table Surrogate Keys (Bob Becker, Design Tip #81, Jul 6, 2006), 309–310
- Fact Tables (Ralph Kimball, DM Review, Dec 1, 2008), 31-33
- Fact Tables and Dimension Tables (Ralph Kimball, Intelligent Enterprise, Jan 1, 2003), 203-207
- Fact Tables for Text Document Searching (Ralph Kimball, Intelligent Enterprise, Nov 10, 2000), 485-489
- Factless Fact Tables (Ralph Kimball, DBMS, Sep 1996), 295-298
- Factless Fact Tables for Simplification (Bob Becker, Design Tip #133, Apr 5, 2011), 302-304
- Factless Fact Tables? Sounds Like Jumbo Shrimp? (Bob Becker and Bill Schmarzo, Design Tip #50, Oct 16, 2003), 298-299
- Features for Query Tools (Ralph Kimball, DBMS, Feb 1997), 792-794
- Final Word of the Day: Collaboration (Margy Ross, Design Tip #177, Sep 1, 2015), 841-843
- Fistful of Flaws (Margy Ross, Intelligent Enterprise, Oct 10, 2003), 257-260
- Five Alternatives for Better Employee Dimensional Modeling (Joy Mundy, Intelligent Enterprise, Aug 17, 2009), 417–424
- Focus on Business Processes, Not Business Departments! (Margy Ross, Design Tip #3, Jan 30, 2000), 134–135
- Four Fixes for Legacy Data Warehouses (Margy Ross, Intelligent Enterprise, Oct 1, 2006), 831-835
- Fundamental Grains (Ralph Kimball, Intelligent Enterprise, Mar 30, 1999), 277-280
- The Future is Bright (Ralph Kimball, Design Tip #180, Dec 1, 2015), 847-851

G

Get Started with Data Mining Now (Warren Thornthwaite, Intelligent Enterprise, Oct 1, 2005), 774-778

- Getting Your Data Warehouse Back on Track (Margy Ross and Bob Becker, Design Tip #7, Apr 30, 2000), 828-829
- Going Agile? Start with Bus Matrix (Margy Ross, Design Tip #155, May 1, 2013), 179-180
- Graceful Modifications to Existing Fact and Dimension Tables (Ralph Kimball, Design Tip #29, Oct 15, 2001), 219-220

Н

- Habits of Effective Sponsors (Margy Ross, Intelligent Enterprise, Sep 1, 2003), 100-103
- Handling All the Dates (Bob Becker, Design Tip #61, Oct 28, 2004), 343-344
- Have You Built Your Audit Dimensions Yet? (Ralph Kimball, Design Tip #164, Mar 3, 2014), 560-562
- Help for Dimensional Modeling (Ralph Kimball, DBMS, Aug 1998), 392-395
- Help for Hierarchies (Ralph Kimball, DBMS, Sep 1998), 414-417
- History Lesson on Ralph Kimball and Xerox PARC (Margy Ross, Design Tip #144, Apr 3, 2012), 36-37
- Hot-Swappable Dimensions (Ralph Kimball, Design Tip #16, Dec 8, 2000), 360-361
- Human Resources Dimensional Models (Ralph Kimball, DBMS, Feb 1998), 463-466
- The Hyper-Granular Active Archive (Ralph Kimball, Design Tip #165, Apr 2, 2014), 670-672

- Identify Dimension Changes Using Cyclic Redundancy Checksums (Ralph Kimball, Design Tip #4, Feb 21, 2000), 580-581
- Identifying Business Processes (Margy Ross, Design Tip #69, Jul 5, 2005), 135-137
- Implementation Analysis Paralysis (Bob Becker, Design Tip #66, Apr 11, 2005), 95–96
- Indicators of Quality: The Audit Dimension (Ralph Kimball, Intelligent Enterprise, Apr 10, 2000), 553-556
- Industry Standard Data Models Fall Short, (Margy Ross, Intelligent Enterprise, Sep 13, 2010), 453-455
- An Insurance Data Warehouse Case Study (Ralph Kimball, DBMS, Dec 1995), 455-459
- Integration for Real People (Ralph Kimball, Intelligent Enterprise, Aug 1, 2006), 181-185
- Involve Business Representatives in Dimension Modeling (Bob Becker, Design Tip #157, Jun 28, 2013), 245-246

- Is Agile Enterprise Data Warehousing an Oxymoron? (Ralph Kimball, Design Tip #111, Apr 1, 2009), 177-179
- Is Big Data Compatible with the Date Warehouse? (Ralph Kimball, Design Tip #146, Jun 5, 2012), 640-641
- Is Data Staging Relational? (Ralph Kimball, DBMS, Apr 1998), 513–517
- Is ER Modeling Hazardous to DSS? (Ralph Kimball, DBMS, Oct 1995), 147-151
- Is it a Dimension, a Fact, or Both? (Joy Mundy, Design Tip #140, Nov 1, 2011), 294–295
- Is Your Data Correct? (Ralph Kimball, Intelligent Enterprise, Dec 5, 2000), 562-565
- It's Time for Time (Ralph Kimball, DBMS, Jul 1997), 335-337

Judge Your BI Tool through Your Dimensions (Ralph Kimball, DBMS, Nov 1, 2008), 28–30

K

- Keep to the Grain in Dimensional Modeling (Ralph Kimball, Intelligent Enterprise, Jul 30, 2007), 270-272
- Keep Your Keys Simple (Ralph Kimball, Design Tip #100, Apr 3, 2008), 331–333
- Keeping Text Out of the Fact Table (Bob Becker, Design Tip #55, Jun 9, 2004), 316–317
- Key Tenets of the Kimball Method (Joy Mundy, Design Tip #179, Nov 3, 2015), 845-847
- The Keyword Dimension (Ralph Kimball, Intelligent Enterprise, Oct 20, 2000), 399-403
- Kimball Lifecycle in a Nutshell (Margy Ross, Design Tip #115, Aug 4, 2009), 108-111
- Kimball's Ten Essential Rules of Dimensional Modeling (Margy Ross, Intelligent Enterprise, May 29, 2009), 221-223

L

- Latest Thinking on Time Dimension Tables (Ralph Kimball, Design Tip #51, Feb 1, 2004), 339-340
- Let's Improve Our Operating Procedures (Joy Mundy, Design Tip #52, Mar 4, 2004), 809-811
- Letting the Users Sleep (Ralph Kimball, DBMS, Dec 1996 and Jan 1997), 233-240
- Leverage Data Visualization Tools, But Avoid Anarchy (Joy Mundy, Design Tip #162, Jan 7, 2014), 745-747

- Leverage Process Metadata for Self-Monitoring DW Operations (Bob Becker, Design Tip #170, Nov 5, 2014), 709–712
- Leverage Your Dimensional Model for Predictive Analytics (Ralph Kimball, Design Tip #172, Feb 2, 2015), 778-779

M

- Maintaining Back Pointers to Operational Sources (Ralph Kimball, Design Tip #67, May 4, 2005), 581-582
- Maintaining Dimension Hierarchies (Joy Mundy, Intelligent Enterprise, Oct 27, 2008), 409-414
- Making Sense of the Semantic Layer (Joy Mundy, Design Tip #158, Aug 5, 2013), 762–763
- Managing Backlogs Dimensionally (Bob Becker, Design Tip #118, Nov 4, 2009), 467-468
- Managing Bridge Tables (Ralph Kimball, Intelligent Enterprise, Aug 10, 2001), 395-398
- Managing Large Dimensional Design Teams (Bob Becker, Design Tip #161, Nov 5, 2013), 246-248
- Managing Your Parents (Ralph Kimball, Intelligent Enterprise, Sep 18, 2001), 304-307
- Many Alternate Realities (Ralph Kimball, Intelligent Enterprise, Feb 9, 2000), 364-367
- Marketing the DW/BI System (Warren Thornthwaite, Design Tip #91, May 30, 2007), 811–812
- The Matrix (Ralph Kimball, Intelligent Enterprise, Dec 7, 1999), 166-170
- The Matrix: Revisited (Margy Ross, Intelligent Enterprise, Dec 1, 2005), 170-174
- Measure Twice, Cut Once (Warren Thornthwaite, Intelligent Enterprise, Dec 10, 2003), 523-527
- Meta Meta Data Data (Ralph Kimball, DBMS, Mar 1998), 704-708
- Microsoft SQL Server Comes of Age for Data Warehousing (Warren Thornthwaite, Intelligent Enterprise, Jun 23, 2008), 682-686
- Modeling a Pipeline with an Accumulating Snapshot (Ralph Kimball, Design Tip #37, Jun 13, 2002), 280-282
- Modeling Data as Both a Fact and Dimension Attribute (Ralph Kimball, Design Tip #97, Dec 11, 2007), 318-319
- Modeling Time Spans (Ralph Kimball, Design Tip #35, Mar 27, 2002), 286–289
- Monster Dimensions (Ralph Kimball, DBMS, May 1996), 367–370

- More Business Requirements Gathering Dos and Don'ts (Margy Ross, Design Tip #110, May 4, 2009), 127-129
- Much Ado about Nothing (Margy Ross, Design Tip #139, Oct 5, 2011), 198-199
- Multinational Dimensional Data Warehouse Considerations (Ralph Kimball, Design Tip #24, Jun 1, 2001), 452–453
- Mystery Dimensions (Ralph Kimball, Intelligent Enterprise, Mar 20, 2000), 350-353
- Myth Busters (Ralph Kimball, DM Review, Feb 2008), 9 - 10

Ν

- The Naming Game (Warren Thornthwaite, Design Tip #71, Sep 2, 2005), 249–250
- New Directions for ETL (Ralph Kimball, Design Tip #169, Sep 8, 2014), 533-535
- Newly Emerging Best Practices for Big Data (Ralph Kimball, White Paper, Sep 30, 2012), 659–670
- No Detail Too Small (Margy Ross, Intelligent Enterprise, Oct 30, 2003), 273-276
- Not So Fast (Ralph Kimball, Intelligent Enterprise, Oct 26, 1999), 468-471

- Off the Bench (Margy Ross, Design Tip #49, Sep 15, 2003), 111–112
- Overcoming Obstacles When Gathering Business Requirements (Margy Ross, Intelligent Enterprise, Jun 2007), 130-133

- Patterns to Avoid When Modeling Header/Line Item Transactions (Margy Ross, Design Tip #95, Oct 2, 2007), 307-309
- The Perfect Handoff (Ralph Kimball, Intelligent Enterprise, Dec 21, 1999), 770-774
- Perfectly Partitioning History with Type 2 SCD (Ralph Kimball, Design Tip #8, May 21, 2000), 363-364
- Picking the Right Approach to MDM (Warren Thornthwaite, *Intelligent Enterprise*, Feb 7, 2007), 619-625
- Pipelining Your Surrogates (Ralph Kimball, DBMS, Jun 1998), 572-576
- Pivoting the Fact Table with a Fact Dimension (Joy Mundy, Design Tip #82, Aug 2, 2006), 323-324
- Potential Bridge (Table) Detours (Margy Ross, Design Tip #166, May 14, 2014), 403–405

- Practical Steps for Designing a Dimensional Model (Margy Ross, Intelligent Enterprise, Sep 29, 2008), 240-243
- Preparing for Data Mining (Ralph Kimball, DBMS, Nov 1997), 766-770
- The Problem with Comparisons (Ralph Kimball, DBMS, Jan 1996), 785-788
- Professional Boundaries (Ralph Kimball, DBMS, Jul 1998), 75–78
- The Promise of Decision Support (Bill Schmarzo, Intelligent Enterprise, Dec 5, 2002), 730-733
- Put Your Fact Tables on a Diet (Ralph Kimball, Design Tip #30, Nov 3, 2001), 314–316

R

- Rating Your Dimensional Data Warehouse (Ralph Kimball, Intelligent Enterprise, Apr 28, 2000 and May 15, 2000), 260-265
- Reader Suggestions on Fact Table Surrogate Keys (Ralph Kimball and Bob Becker, Design Tip #84, Oct 3, 2006), 310-312
- Real-Time Partitions (Ralph Kimball, Intelligent Enterprise, Feb 1, 2002), 610-613
- The Real-Time Triage (Ralph Kimball, Design Tip #89, Mar 20, 2007), 613-615
- Relating to Agile Methodologies (Margy Ross, Design Tip #73, Nov 17, 2005), 176–177
- Relating to OLAP (Joy Mundy, Intelligent Enterprise, Oct 8, 2002), 676-679
- Relationship between Strategic Business Initiatives and Business Processes (Bill Schmarzo, Design Tip #47, Jul 10, 2003), 138-139
- Replicating Dimensions Correctly (Ralph Kimball, Design Tip #19, Feb 5, 2001), 579-580
- Resist Abstract Generic Dimensions (Margy Ross, Design Tip #83, Sep 8, 2006), 359-360
- Resist the Urge to Start Coding (Ralph Kimball, DM Review, Nov 2007), 1-4
- RFID Tags and Smart Dust (Ralph Kimball, Intelligent Enterprise, Jul 18, 2003), 637-640
- Risky Project Resources Are Risky Business (Margy Ross, Design Tip #173, Mar 9, 2015), 93–95
- A Rolling Prediction of the Future, Now and in the Past (Ralph Kimball, Design Tip #23, May 2, 2001), 289-292

S

The Second Revolution of User Interfaces (Ralph Kimball, Intelligent Enterprise, Aug 24, 1999), 697-699

- Selecting Default Values for Nulls (Bob Becker, Design Tip #128, Oct 6, 2010), 345–346
- Server Configuration Considerations (Warren Thornthwaite, Design Tip #102, Jun 3, 2008), 723-725
- Set Your Boundaries (Ralph Kimball, DM Review, Dec 2007), 4-6
- Should You Use an ETL Tool? (Joy Mundy, Intelligent Enterprise, Apr 6, 2008), 518–521
- Showing the Correlation between Dimensions (Ralph Kimball, Design Tip #6, Apr 10, 2000), 354–356
- Simple Drill Across in SQL (Warren Thornthwaite, Design Tip #68, Jun 3, 2005), 781–783
- Six Key Decisions of ETL Architectures (Bob Becker, Intelligent Enterprise, Oct 9, 2009), 504–508
- Slowly Changing Dimensions (Ralph Kimball, DM Review, Sep 1, 2008 and Oct 1, 2008), 25-28
- Slowly Changing Dimensions Are Not Always as Easy as 1, 2, and 3 (Margy Ross, Intelligent Enterprise, Mar 1, 2005), 373–378
- Slowly Changing Dimension Types 0, 4, 5, 6 and 7 (Margy Ross, Design Tip #152, Feb 5, 2013), 378-381
- Slowly Changing Entities (Ralph Kimball, Design Tip #90, Apr 30, 2007), 591–593
- Smart Date Keys to Partition Fact Tables (Warren Thornthwaite, Design Tip #85, Nov 1, 2006), 341-342
- Smarter Data Warehouses (Joy Mundy, Intelligent Enterprise, Feb 16, 2001), 798-803
- Snowflakes, Outriggers, and Bridges (Margy Ross, Design Tip #105, Sep 3, 2008), 385-388
- The Soul of the Data Warehouse, Part One: Drilling Down (Ralph Kimball, Intelligent Enterprise, Mar 20, 2003), 210-213
- The Soul of the Data Warehouse, Part Two: Drilling Across (Ralph Kimball, Intelligent Enterprise, Apr 5, 2003), 213–216
- The Soul of the Data Warehouse, Part Three: Handling Time (Ralph Kimball, Intelligent Enterprise, Apr 22, 2003), 216-219
- Sparse Facts and Facts with Short Lifetimes (Ralph Kimball, Design Tip #20, Feb 27, 2001), 321-323
- Spatially Enabling Your Data Warehouse (Ralph Kimball, Intelligent Enterprise, Jan 1, 2001 and Jan 30, 2001), 448–452
- The Special Dimensions of the Clickstream (Ralph Kimball, Intelligent Enterprise, Jan 20, 2000),
- SQL Roadblocks and Pitfalls (Ralph Kimball, DBMS, Feb 1996), 789-792

- Staffing the Dimensional Modeling Team (Bob Becker, Design Tip #103, Jul 1, 2008), 243-244
- Staging Areas and ETL Tools (Joy Mundy, Design Tip #99, Mar 4, 2008), 517–518
- Standard Reports: Basics for Business Users (Joy Mundy and Warren Thornthwaite, Intelligent Enterprise, Feb 1, 2006), 748–753
- Stirring Things Up (Ralph Kimball, Intelligent Enterprise, Jun 22, 1999), 57-60
- Surprising Value of Data Profiling (Ralph Kimball, Design Tip #59, Sep 14, 2004), 133-134
- Surrogate Keys (Ralph Kimball, DBMS, May 1998), 327-331
- Surrogate Keys for the Time Dimension (Ralph Kimball, Design Tip #5, Mar 19, 2000), 337–339
- Surrounding the ETL Requirements (Ralph Kimball, Intelligent Enterprise, Nov 13, 2004), 495–500

Т

- TCO Starts with the End User (Intelligent Enterprise, May 13, 2003), 103–108
- There Are No Guarantees (Ralph Kimball, Intelligent Enterprise, Aug 2000), 159-163
- There Is No Database Magic (Joy Mundy, Design Tip #175, Jun 8, 2015), 673–676
- Think Critically When Applying Best Practices (Bob Becker and Ralph Kimball, Intelligent Enterprise, Mar 26, 2007), 115-117
- Think Dimensionally (Beyond Data Modeling) (Margy Ross, Design Tip #160, Oct 3, 2013), 144–145
- Think Globally, Act Locally (Ralph Kimball, Intelligent Enterprise, Dec 1998), 439-443
- Think Like a Software Development Manager (Warren Thornthwaite, Design Tip #96, Oct 31, 2007), 747-748
- Three Critical Components for Successful Self-Service BI (Joy Mundy, Design Tip #153, Mar 4, 2013), 743-745
- Three ETL Compromises to Avoid (Bob Becker, Intelligent Enterprise, Mar 1, 2010), 508–510
- Three Ways to Capture Customer Satisfaction (Ralph Kimball, Intelligent Enterprise, Feb 4, 2008), 431-435
- Timespan Accumulating Snapshot Fact Tables (Joy Mundy, Design Tip #145, May 1, 2012), 293-294
- To Be or Not To Be Centralized (Margy Ross, Intelligent Enterprise, Feb 1, 2003), 189-192
- Traveling through Databases (Ralph Kimball, DBMS, May 1997), 460–463

- Tried and True Concepts for DW/BI Success (Bob Becker, *Design Tip #178*, Oct 1, 2015), 843–845
- A Trio of Interesting Snowflakes (Ralph Kimball, *Intelligent Enterprise*, Jun 29, 2001), 388–392
- Turbocharge Your Query Tools (Ralph Kimball, *DBMS*, Sep 1997), 794–798
- Two Powerful Ideas (Ralph Kimball, *Intelligent Enterprise*, Sep 17, 2002), 64–67

U

- Unclogging the Fact Table Surrogate Key Pipeline (Joy Mundy, *Design Tip #171*, Jan 5, 2015), 576–579
- Updating the Date Dimension (Joy Mundy, *Design Tip* #119, Dec 2, 2009), 342–343
- Upgrading Your BI Architecture (Joy Mundy, *Design Tip #104*, Aug 7, 2008), 829–831
- Use a Design Charter to Keep Business Modeling Activities on Track (Bob Becker, *Design Tip #138*, Sep 7, 2011), 248–249
- Using Regular Expressions for Data Cleaning (Warren Thornthwaite, *Intelligent Enterprise*, Jan 19, 2009), 568–572
- Using the Dimensional Model to Validate Business Requirements (Bob Becker, *Design Tip #123*, May 5, 2010), 145–146
- Using the SQL MERGE Statement for Slowly Changing Dimensions (Warren Thornthwaite, *Design Tip* #107, Nov 6, 2008), 593–595

W

- Warehousing without Borders (Ralph Kimball, *Intelligent Enterprise*, Mar 30, 1999), 443–448
- Warning: Summary Data May Be Hazardous to Your Health (Margy Ross, *Design Tip #77*, Mar 9, 2006), 272–273
- Watching the Watchers (Ralph Kimball, *Intelligent Enterprise*, Jul 17, 2000), 712–716
- Welcoming the Packaged App (Ralph Kimball, Intelligent Enterprise, Jun 5, 2000), 626–629
- What Didn't Happen (Ralph Kimball, *Intelligent Enterprise*, Feb 1999), 299–302
- What Does the Central Team Do? (Ralph Kimball, *DBMS*, Jun 1997), 86–90
- What Not to Do (Ralph Kimball, *Intelligent Enterprise*, Oct 24, 2001), 223–225
- What's in a Name (Joy Mundy, *Design Tip #168*, Jul 21, 2014), 250–253
- When a Fact Table Can Be Used as Dimension Table (Ralph Kimball, *Design Tip #13*, Sep 15, 2000), 319–321
- When a Slowly Changing Dimension Speeds Up (Ralph Kimball, *Intelligent Enterprise*, Aug 3, 1999), 370–372
- When Do Dimensions Become Dangerous? (Ralph Kimball, *Design Tip #79*, May 10, 2006), 372–373
- When Is the Dimensional Design Done? (Bob Becker, *Design Tip #108*, Dec 3, 2008), 253–254
- Working in Web Time (Ralph Kimball, *Intelligent Enterprise*, Nov 16, 1999), 606–610
- Wrangling Behavior Tags (Ralph Kimball, *Intelligent Enterprise*, May 9, 2002), 429–431