

Index

A

Accessing data, 345
 paths, 345
 Ad hoc queries, 245
 Adelman, Sid (biographical sketch), 391
 Aggregating data values
 definition, 345
 rolled up, 363
 Analytics applications, 345
 Analyzing
 campaigns, 348
 data
 analytics applications, 345
 data mining, 351
 definition, 345, 351
 gap analysis, 356
 users' fear of multidimensional analysis
 tools, 121–123
 project costs/benefits, 350
 justification of projects, 357
 Anomalies, 346
 Application service providers (ASPs)
 definition, 346
 outsourcing data warehouse activities,
 171–173
 Architecture, data warehouses, 209
 backdated transactions, effect on values,
 318–319
 basics, 303–305
 blurred visions, 37–39
 checklist, 215
 definition, 346, 351
 developing simultaneously with operational
 system, 321–325
 inadequate architecture, 305–309

 meta data integration across multiple prod-
 ucts, 326–330
 problems of click-stream data warehouses,
 319–320
 reconciling UPC code changes, 330–332
 role of reporting system, 325–326
 stovepipes impeding integration, 309–317
 time-variant analysis, 320–321
 Atomic data, 346
 Attributes of entities, 346
 Availability of system, 346

B

Back-end processes, 346
 Base tables
 definition, 346
 security, 242
 Batch windows, 347
 Best of breed (tools), 347
 Best practices
 definition, 347
 preventing data warehouse failure, 8
 Beta release, 347
 BI (business intelligence)
 definition, 347
 federated architecture, 214
 standards for data warehouse planning,
 212–215
 Bischoff, Joyce (biographical sketch), 391–392
 Brinkman Method, 140
 Budgeting/justification of data warehouse
 projects
 basics, 51–53
 cost allocations, 62–66
 definition, 51, 357

- Budgeting/justification of data warehouse projects *continued*
 - historical data, 66–69
 - identifying infrastructure benefits, 57–59
 - need by retailers, 59–62
 - prototype money unavailable, 69–73
 - substantiation of estimates required, 172–180
 - Business intelligence (BI)
 - definition, 347
 - federated architecture, 214
 - standards for data warehouse planning, 212–215
 - Business lines
 - definition, 357
 - effectiveness of building data warehouses, 88–93
 - Business process engineering, 347
 - Business rules
 - data warehouse design, 32
 - definition, 348
 - Business sponsors
 - definition, 348
 - prioritizing data for data warehouses, 112–116
 - real-time data warehouse updates, 289–292
 - Business timestamps, 348
 - Business users. *See* Users, data warehouses
- C**
- Caching reports, 348
 - Campaign analysis, 348
 - Capability Maturity Model (CMM)
 - chain of command for data warehouse team reporting, 81
 - definition, 348
 - recognition of data quality value, 265
 - CASE Data Interchange Format (CDIF)
 - definition, 348
 - integrating meta data across multiple products, 328
 - CASE tools, 349
 - CDIF. *See* CASE Data Interchange Format (CDIF)
 - CEO (chief executive officer)
 - chain of command for reporting, 79, 80
 - data warehouses
 - role in building, 10
 - role in data sharing, 19, 21, 22
 - role in encouraging data, 19
 - definition, 349
 - Certified Information Systems Security Professional (CISSP) certification, 247
 - CFO (chief financial officer)
 - chain of command for reporting, 79
 - data warehouses
 - needs of retailers, 59–62
 - project cost justification, 51
 - role in data sharing, 22
 - definition, 349
 - Champions, 349
 - Channels, products, 349
 - Charge backs
 - definition, 349
 - importance, 64
 - Check totals, 349
 - CIF (corporate information factory), 350
 - CIO (chief information officer)
 - chain of command for reporting, 78–79, 81
 - data warehouses
 - decisions required when consultants are running show, 153–157
 - decisions required when consultants offer to solve problems, 150–153
 - ensuring success, 9, 10
 - needs of retailers, 59–62
 - role in data sharing, 20–22
 - undermining success, 14–16
 - definition, 349
 - CKO (chief knowledge officer)
 - chain of command for reporting, 80
 - definition, 349
 - Classes (objects), 349, 359
 - instances, 356
 - Click streams, 349
 - problems of click-stream data warehouses, 319–320
 - CMM (Capability Maturity Model)
 - chain of command for data warehouse team reporting, 81
 - definition, 348
 - recognition of data quality value, 265
 - Communication Profile (DISC), 140
 - Computer Aided Software Engineering. *See* CASE
 - Conformed dimensions, 349
 - Consultants and contractors
 - challenges in training team members, 161–165
 - definition, 349, 350
 - effective use, 165–171

- infringing on team responsibilities, 153–157
 - lack of warehouse support by business, 116–119
 - leaving poor data warehouse behind, 157–161
 - offering to revamp outdated data warehouse, 150–153
 - Control totals, 350
 - COO (chief operating officer)
 - chain of command for reporting, 79
 - data warehouses
 - role in data sharing, 22
 - definition, 350
 - Corporate information factory (CIF), 350
 - Cost/benefit analysis
 - definition, 350
 - justification of projects, 51, 357
 - CREATE TABLE command, 345
 - Critical success factors, 350
 - CRM (customer relationship management)
 - definition, 350
 - designing click-stream data warehouse, 319–320
 - outsourcing data warehouse activities, 172–173
 - Cross-organizational, 350
 - Cross-selling, 350
 - CTO (chief technology officer)
 - data warehouse and operational systems integration, 287–289
 - data warehouse needs, 61
 - definition, 350
 - Customer relationship management (CRM)
 - definition, 350
 - designing click-stream data warehouse, 319–320
 - outsourcing data warehouse activities, 172–173
 - Customer segmentation, 350
 - “Cybersecurity Today and Tomorrow: Pay Now or Pay Later,” 247
- D**
- Data. *See* Atomic data; Historical data; Meta data; Real-time data
 - Data access, 345
 - access paths, 345
 - Data administrators (DAs), 351
 - Data analysis
 - analytics applications, 345
 - data mining, 351
 - definition, 345, 351
 - Data definition language (DDL)
 - challenges of changes
 - operational system, 30
 - source systems, 33
 - definition, 351
 - Data derivations, 353
 - Data dimensions, 353
 - Data integration, 356
 - Data loading, 351
 - Data mapping, 351
 - Data marts
 - architecture, 312
 - definition, 351
 - effectiveness of single department control, 88–93
 - Data mining
 - data warehouses standards, 210–212
 - definition, 351
 - Data models
 - logical, 357
 - subject oriented, 35
 - Data owners, 351
 - Data quality
 - basics, 249–251
 - data-cleansing tools, 254
 - definition, 352
 - eliminating redundant data, 256–259
 - estimating dirty data, 259–263
 - ETL process partial failure, 269–272
 - obsession with quality by data warehouse architect, 266–269
 - sampling, 251–256
 - source data errors causing massive updates, 272–273
 - value not recognized by management, 263–266
 - Data stewardship, 352
 - Data warehouse projects
 - 3 Ss (scope, staff, schedule), 187
 - budgeting and justification, 357
 - basics, 51–53
 - cost allocations, 62–66
 - historical data, 66–69
 - identifying infrastructure benefits, 57–59
 - need by retailers, 59–62
 - prototype money unavailable, 69–73
 - substantiation of estimates, 177–180
 - user productivity justification not allowed, 53–57

- Data warehouse projects *continued*
- business sponsor rotation, 85–88
 - deadlines
 - definition, 352
 - unrealistic, 180–184
 - deliverables, 353
 - design reviews, 353
 - effectiveness of business lines building warehouses, 88–93
 - goals and objectives, 28–29
 - iterations, 357
 - iterative development, 357
 - lack of business support, 116–119
 - management offices, 361
 - milestones, 358
 - objectives, 359
 - PERT charts, 360
 - project and scope agreements, 176, 184–188, 361
 - project planning, 176
 - scheduling, 177
 - underestimating, 192–195
 - sign-off, 364
 - stakeholders, 365
 - team members, 77
 - chain of command for reporting, 78–81
 - consultants and contractors, 133–134
 - consultants and contractors, challenges in training team members, 161–165
 - consultants and contractors, effective use, 165–171
 - consultants and contractors, infringing on team responsibilities, 153–157
 - consultants and contractors, leaving poor data warehouse behind, 157–161
 - consultants and contractors, offering to revamp outdated data warehouse, 150–153
 - dishonesty by members in making progress reports, 147–150
 - dissension, caused by prima donnas, 144–146
 - dissension, caused by single member, 134–137
 - dysfunctional members, 137–141
 - FAQs (frequently asked questions), 76
 - goals, 132–133
 - help desk staffs, 76–77
 - incentives, 133
 - ineffectiveness of multiple DBAs assigned to project, 81–85
 - issues, 131–132
 - lack of dedicated staff, 93–99
 - management wanting to outsource warehouse activities, 171–173
 - requirement of consensus by all members, 141–144
 - responsibilities, 175
 - unrealistic expectations by users, 188–192
 - variables, 28
 - blurred vision, 37–39
 - changing of operational systems, 29–32
 - changing of source systems, 32–37
 - management not recognizing success, 48–450
 - objectives improperly identified leaving no method for evaluation, 40–43
 - prototypes become production too early, 43–48
- Data warehouses
- architecture, 209
 - backdated transactions, effect on values, 318–319
 - basics, 303–305
 - blurred visions, 37–39
 - checklist, 215
 - definition, 346, 351, 352
 - developing simultaneously with operational system, 321–325
 - inadequate architecture, 305–309
 - meta data integration across multiple products, 326–330
 - problems of click-stream data warehouses, 319–320
 - reconciling UPC code changes, 330–332
 - role of reporting system, 325–326
 - stovepipes impeding integration, 309–317
 - time-variant analysis, 320–321
 - business sponsors, 348
 - rotating sponsors for warehousing projects, 85–88
 - champions, 349
 - consultants, 349
 - data loading, 351
 - data staging, 352
 - definition, 352
 - executive sponsors, 75–76
 - integrating with operational data/data sources
 - avoiding building of stovepipe systems, 292–296

- business sponsor wants real-time updates, 289–292
- centralization or decentralization, 287–289
- delay by enterprise model development, 281–286
- reports from warehouse and operational systems don't match, 297–299
- responsibility for fixing inadequate operational systems, 299–301
- from separate management systems, 276–281
- organization's lack of readiness, 104–108
- performance
 - basics, 333–334
 - fact table loading, 340–343
 - software not performing properly, 334–335
 - warehouse growth exceeds source data growth, 336–340
- security
 - basics, 239–240
 - designating responsible person, 243–245
 - information resources, 245–247
 - security plan, implementing, 245–247
 - security plan, lack of, 241–243
- standards
 - basics, 199–200
 - business intelligence environment planning, 212–215
 - companies with no previous methodology experience, 200–202
 - data mining, 210–212
 - DBAs wanting OLTP rather than OLAP design, 203–205
 - employees misusing data warehouse terminology, 206–210
- tie and foot validation, 366
- tools
 - based on OO (object-oriented) environment, 223–225
 - basics, 217–218
 - performance criteria, 228–231
 - rejected vendors not taking no for answer, 233–235
 - RFPs (requests for proposals), 218–220
 - selection by IT rather than committee, 225–228
 - selection influenced unduly by vendors, 231–233
 - users dissatisfaction with tools, 220–223
 - vendors's acquiring company providing poor support, 235–237
 - VLDBs (very large databases), 218
 - virtual enterprise data warehouse, 367
 - visions/visionaries, 367
 - blurred vision, 37–39
- Data warehouses and management
 - best practices to prevent failure, 8
 - criteria for project success, 5
 - definition, 352, 361
 - dissension between management positions, 99–102
 - documentation of project's definition, scope and requirements, 13
 - inability to recruit employees, 102–104
 - ineffectiveness of multiple DBAs assigned to warehousing project, 81–85
 - IT role
 - failure in its responsibilities, 9–11
 - lack of understanding of projects, 3–4
 - undermining project success, 14–16
 - lack of understanding of projects/details, 3–4, 22–26
 - management's constant change, 11–14
 - organization's lack of readiness for project, 104–108
 - QA expectations, unrealistic for pilot, 16–19
 - reluctance to accept warehouses
 - fear of sharing data, 4, 19–22
 - previous failures, 5–9
- Database administrators (DBAs)
 - chain of command for reporting, 77
 - definition, 352
 - ineffectiveness of multiple DBAs assigned to warehousing project, 81–85
- Database design schemas. *See* Physical data model
- Database management systems (DBMSs), 352
- Databases
 - multidimensional, 358
 - very large databases, 367
- DBAs (database administrators)
 - chain of command for reporting, 77
 - ineffectiveness of multiple DBAs assigned to warehousing project, 81–85
 - using OLTP instead of OLAP for data warehouses, 202–205
- DBMSs (database management systems), 352

- DDL (data definition language)
 challenges of changes
 operational system, 30
 source system, 33
 definition, 351
- Deadlines
 definition, 352
 unrealistic, 180–184
- Decision support systems (DSSs), 353, 354
- Deliverables, projects, 353
- Delta, 353
- Demos, 353
- Denormalization of data, 353
- Departmental systems, 353
- Derivations, data, 353
- Derived data, 353
- Design reviews, projects, 353
- Dimensional hierarchy, 354
- Dimensions, 353
- Direct access storage device (DASD), 354
- Dirty data, 249
 estimating, 259–263
- DISC (Communication Profile), 140
- Domains, 354
- Dotted-line (responsibility), 354
- DSADs (direct access storage devices), 354
- DSSs (decision support systems), 353, 354
- Dyché, Jill (biographical sketch), 392
- E**
- EAI (enterprise application integration)
 data warehouse and operational systems integration, 290
 definition, 354
- EISs (executive information systems), 355
- Encryption of sensitive material, 241
- Enterprise application integration (EAI), 354
 data warehouse and operational systems integration, 290
- Enterprise data warehouses, 354
 blurred visions, 37–39
- Enterprise resource modeling
 data warehouse and operational system integration, 281–286
 definition, 354
- Enterprise resource planning (ERP), 354
- Enterprise systems, 355
 subject areas, 365
- Entities, 355
 attributes, 346
- Entity-Relationship modeling, 278–279
- ER (entity relationship) modeling, 354
- ERP (enterprise resource planning), 354
- ETL (extract/transform/load) processes
 batch windows, 347
 control totals, 350
 data quality, partial failure, 269–272
 data warehouse tools, 228–231
 OO (object oriented) environment, 224
 definition, 355
 derived data, 353
 operational system changes, 29–32
 role of IT in building data warehouses, 9–11
 role of team members in building data warehouses, 175
 source systems, 364
 staging areas, 365
- Executive information systems (EISs), 355
- Executive sponsors, 75–76
- External data sources, ETL processes, 355
- Extract/transform/load (ETL) processes
 batch windows, 347
 control totals, 350
 data quality, partial failure, 269–272
 data warehouse tools, 228–231
 OO (object oriented) environment, 224
 definition, 355
 derived data, 353
 operational system changes, 29–32
 role of IT in building data warehouses, 9–11
 role of team members in building data warehouses, 175
 source systems, 364
 staging areas, 365
- F**
- Fact tables, 355
 granularity, 356
 performance of data warehouses, 340–343
 star schemas, 365
- FAQs (frequently asked questions)
 definition, 355
 help desk staff, 76
- Federated database systems
 data flow, 310
 definition, 355

- File transfer programs (FTP), 355
 - Foreign keys, 355
 - referential integrity, 362
 - Frequently asked questions (FAQs)
 - definition, 355
 - help desk staff, 76
 - Front-end processes, 356
 - FTP (file transfer programs), 355
- G**
- Gap analysis, 356
 - Global 2000, 356
 - Goals, data warehouse projects, 356
 - misunderstandings, 40–43
 - team members, 132–133
 - Granularity, fact tables, 356
 - Guidelines, 356
- H**
- Hackney, Douglas (biographical sketch), 392–393
 - Hard-dollar benefits, 356
 - Help desk staffs, 76–77
 - Hierarchy, dimensional, 354
 - Historical data
 - data warehouses
 - architecture, 304
 - justification, 66–69
 - definition, 356
- I**
- I/Os (inputs/outputs), 356
 - Information centers, 356
 - Information Systems Audit and Control
 - Association Web site, 246
 - Information technology (IT)
 - attitude required for project success, 3
 - data warehouses
 - lack of responsiveness for resources and information, 9–11
 - definition, 356
 - undermining project success, 14–16
 - Infrastructure, 356
 - Initial public offerings, stock (IPOs), 356
 - Inputs/outputs (I/Os), 356
 - Instances, objects, 356
 - Integration of data, 356
 - IPOs (initial public offerings), 356
 - Islands of automation, 356
- IT (information technology)
 - data warehouses, 35
 - attitude required for project success, 3
 - lack of responsiveness for resources and information, 9–11
 - selection of tools, 225–228
 - definition, 356
 - undermining project success, 14–16
 - Iterations, projects, 357
 - Iterative development, 357
 - Ivoghli, Sean (biographical sketch), 393
- J**
- Joining tables, 357
 - Justification of data warehouse projects, 51, 357
 - basics, 51–53
 - cases where user productivity justification not allowed, 53–57
 - cost allocations, 62–66
 - historical data, 66–69
 - identifying infrastructure benefits, 57–59
 - need by retailers, 59–62
 - prototype money unavailable, 69–73
 - substantiation of estimates required, 172–180
- K**
- Kelley, Chuck (biographical sketch), 393–394
 - Knowledge transfers
 - definition, 357
 - inability of consultants to transfer knowledge to team members, 161–165
- L**
- Legacy systems, 357
 - Libraries of queries and reports, 175, 357
 - Lines of business, 357
 - Logical data models, 357
 - Logical database design, 360
- M**
- Management and data warehouses
 - best practices to prevent failure, 8
 - criteria for project success, 5
 - definition, 352, 361
 - dissension among management positions, 99–102
 - documentation of project's definition, scope and requirements, 13

- Management and data warehouses *continued*
- inability to recruit employees, 102–104
 - IT role
 - failure in its responsibilities, 9–11
 - lack of understanding of projects, 3–4
 - undermining project success, 14–16
 - lack of understanding of projects/details, 3–4, 22–26
 - management's constant change, 11–14
 - multiple DBAs assigned to projects, ineffectiveness, 81–85
 - organization's lack of readiness for project, 104–108
 - QA expectations, unrealistic for pilot, 16–19
 - reluctance to accept warehouses
 - fear of sharing data, 4, 19–22
 - previous failures, 5–9
- Mapping data, 351
- Marco, David (biographical sketch), 394–395
- Market penetration, 358
- Massively parallel processing (MPP), 358
- Matrix management, 358
- MBTI (Myers-Briggs Type Indicator), 140
- Measurements
 - metrics, 358
 - success, 52
- Mentors, 358
- Meta data, 175, 199, 358
 - CASE Data Interchange Format (CDIF), 348
 - data warehouse architecture, 304
 - eliminating redundant data, 257, 258
 - integration across multiple products, 326–330
- Meta Group Web site, 246
- Methodologies, data warehouse standards, 200–201
 - definition, 358
 - Project Management Methodology (PMM), 202
- Metrics, 358
- Milestones, 358
- MIS Training Institute, 246
- Missions, 358
- Moss, Larissa T. (biographical sketch), 395
- MPP (massively parallel processing), 358
- Multidimensional databases, 358
- Myers-Briggs Type Indicator (MBTI), 140
- N**
- Near-line storage, 358
- Networking (people), 359
- Networks of systems, 359
- Normalization of data
 - denormalization, 353
 - third normal form, 366
- O**
- Object-oriented (OO) environment, 359
 - data warehouses tools, 223–225
- Objectives, data warehouse projects, 28, 359
 - misunderstandings, 40–43
- Objects, classes, 349, 359
 - instances, 356
- OCM (organizational change management)
 - definition, 359–360
 - justification of projects, 56–57
 - outsourcing data warehouse activities, 173
- ODSs (operational data stores), 359
 - data warehouse and operational systems integration, 291
- OLAP (online analytical processing)
 - definition, 359
 - OLTP standards inappropriate for data warehouses, 202–210
- OLTP (online transaction processing), 359
 - operational system changes, 30
 - role with IT in building successful data warehouse
 - reasons for lack of cooperation, 10
 - ways to solve problems, 11
 - standards inappropriate for data warehouses, 202–210
- Online analytical processing (OLAP), 359
- Online transaction processing (OLTP), 359
- OO (object-oriented) environment, 359
 - data warehouses tools, 223–225
- Operational data/data sources
 - challenges to data warehouse projects
 - source changes, 32–37
 - system changes after project's beginning, 29–32
 - definition, 359
 - ETL processes, 355
 - role in building successful data warehouses, 9
 - integrating with data warehouses
 - avoiding building of stovepipe systems, 292–296
 - business sponsor wants real-time updates, 289–292
 - centralization or decentralization, 287–289

- data flow, 317
 - delay by enterprise model development, 281–286
 - reports from warehouse and operational systems don't match, 297–299
 - responsibility for fixing inadequate operational systems, 299–301
 - from separate management systems, 276–281
 - stovepipes impeding integration, 309–317
 - Operational data stores (ODSs), 209, 359
 - data warehouse and operational systems integration, 291
 - Organizational change management (OCM)
 - definition, 359–360
 - justification of projects, 56–57
 - Outsourcing
 - definition, 360
 - management wanting to outsource warehouse activities, 171–173
 - Ownership, data warehouses, 360
 - total cost, 367
- P**
- Pain, 360
 - Parallelism, 360
 - Partitioning tables, 360
 - Performance of data warehouses
 - basics, 333–334
 - slow fact table loading, 340–343
 - software not performing properly, 334–335
 - warehouse growth exceeds source data growth, 336–340
 - Periodicity, 360
 - Persistent storage, base tables, 345
 - Personal Interests, Attitudes, and Values inventory (PIAV), 140
 - PERT (Program Evaluation and Review Technique) charts
 - definition, 360
 - dishonesty in progress reports, 147
 - Phasing of data warehouse delivery, 360
 - Physical data model, 360
 - PIAV (Personal Interests, Attitudes, and Values) inventory, 140
 - Pilot data warehouses
 - definition, 361
 - unrealistic QA expectations, 16–19
 - Platforms, 361
 - Political agendas, 361
 - Primary keys, 361
 - referential integrity, 362
 - Products
 - channels, 349
 - cross-selling, 350
 - integrating meta data across multiple products, 326–330
 - suites, 365
 - UPCs (universal product codes)
 - definition, 367
 - reconciling changes, 330–332
 - Program Evaluation and Review Technique (PERT) charts
 - definition, 360
 - dishonesty in progress reports, 147
 - Project Management Methodology (PMM), 202
 - Proof-of-concept, 361–362
 - unrealistic QA expectations for pilot data warehouses, 16–19
 - Prototypes, data warehouses
 - cost justification, 69–73
 - definition, 362
 - delays, 29
 - unable to meet production standards, 43–48
 - users inability to articulate needs, 128–129
- Q**
- QA (quality assurance)
 - definition, 362
 - unrealistic expectations for pilot data warehouses, 16–19
 - users' expectations of high data quality, 123–127
 - Queries
 - ad hoc, 245
 - libraries, 175, 357
 - tables
 - foreign keys, 355
 - joining, 357
 - tools, 220–223
- R**
- Rapid application development (RAD), 115
 - definition, 362
 - RDBMS (relational database management systems)
 - challenges of changes
 - operational system, 30
 - source system, 33
 - definition, 362

- Real-time data
 - data warehouse updates, 289–292
 - definition, 362
- Recursive, 362
- Referential integrity, 362
- Rehm, Clay (biographical sketch), 395–396
- Relational database management systems (RDBMS)
 - challenges of changes
 - operational system, 30
 - source system, 33
 - definition, 362
- Relational databases
 - base tables, 345
 - RDBMS, 362
- Release concepts, 363
- Reports
 - caching, 348
 - data warehouse architecture, 313, 325–326
 - libraries, 357
 - team members, data warehouse projects
 - chain of command, 78–81
 - dishonesty in making progress reports, 147–150
 - tools, 220–223
- Return on investment (ROI), 5, 363
- RFPs (requests for proposals), 363
 - data warehouse tools, 218–220
- ROI (return on investment), 5, 52, 363
- Rolled up values, 363
- S**
- Scalability
 - data warehouse architecture, 314
 - definition, 363
- Scope, 363
- Scope creep, 27, 188, 363
- Scope gallop, 27
- Security for data warehouses
 - basics, 239–240
 - designating responsible person, 243–245
 - information resources, 245–247
 - security plan
 - implementing, 245–247
 - lack of plan, 241–243
- Semantic layers, 363
- Service-level agreement (SLA), 364
- Shelfware, 364
- Sign-off, 364
- Silos and siloizing, 364
- Single versions of the truth, 364
- SLA (service-level agreement), 364
- SMP (symmetrical multiprocessing), 366
- Snowflake structure, 364
- SOP (standard operating procedure), 365
- Source data, 364
 - targets, 366
 - tie and foot validation, 366
- Source systems
 - constant changes, 32–37
 - data warehouse design, 32
 - definition, 364
- Sponsors, 364
 - business
 - definition, 348
 - prioritizing data for data warehouses, 112–116
 - real-time data warehouse updates, 289–292
 - executive, 75–76
- Staging areas, 365
- Stakeholders, 365
- Standard operating procedure (SOP), 365
- Star schemas
 - data warehouse and operational systems integration, 277–278
 - definition, 365
- Stovepipes
 - definition, 365
 - impeding data warehouses integration, 309–317
 - integrating data warehouses with operational data/data sources, 292–296
- Strategic data warehouse planning, 365
 - blurred visions, 37–39
- Subject areas, 365
- Suite of products, 365
- Supply chains, 365
- SWAT teams, 365
- Symmetrical multiprocessing (SMP), 366
- System Security Certified Practitioner (SSCP) certification, 247
- System timestamps, 366
- Systems Administration, Networking and Security Institute Web site, 246
- Systems integration, 366

T

Tables. *See also* Base tables; Fact tables

- foreign keys, 355
- joining, 357
- partitioning, 360
- primary keys, 361
- referential integrity, 362

Tactical approaches

- blurred data warehouse visions, 37–39
- definition, 366

Targets, 366

Team members, data warehouse projects

- chain of command for reporting, 78–81
- consultants and contractors, 133–134
- challenges in training team members, 161–165
- effective use, 165–171
- infringing on team responsibilities, 153–157
- offering to revamp outdated data warehouse, 150–153

DBAs (database managers), 77

- dishonesty by members in status reporting, 147–150

dissension

- caused by prima donnas, 144–146
- caused by single member, 134–137

dysfunctional members, 137–141

goals, 132–133

help desk staff, 76

incentives, 133

issues, 131–132

lack of dedicated staff, 93–99

management wanting to outsource warehouse activities, 171–173

requirement of consensus by all members, 141–144

responsibilities, 175

Terabytes, 366

Third normal form, 366

Tie and foot validation, 366

Time dimensions, 366

Time variances

- analysis of data warehouses, 320–321
- definition, 366

Timeliness, 366

Timestamps

- business, 348
- system, 366

Tokenizing of sensitive material, 241

Topology, 366

Total cost of ownership, 367

TQM (total quality management), recognition of data quality value, 265

Triage, 367

Trickle feed, 367

Truth, single versions, 364

U

UPCs (universal product codes)

- definition, 367
- reconciling changes, 330–332

Users, data warehouses

- definition, 348, 367
- dissatisfaction with tools, 220–223
- fear of data sharing, 4, 19–22
- issues, 109–111
 - complexity of multidimensional analysis tools, 121–123
 - expectations of high data quality, 123–127
 - inability to articulate needs, 127–130
 - lack of business support for projects, 116–119
 - lack of support for Web-based application, 119–121
 - prioritizing data for data warehouses, 112–116
- questionnaires on opinions, 23–24
- semantic layers, 364
- use cases, warehouse design, 32
- warehousing projects
 - commitment to ensure staff dedication, 94
 - problems with rotating sponsors, 85–88

V

Value added, 367

Very large databases (VLDBs), 209

- data warehouse and operational systems integration, 291

data warehouse tools, 218

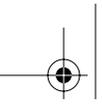
definition, 367

Virtual enterprise data warehouses, 367

Visionaries, 367

Visions for data warehouses

- blurred visions, 37–39
- definition, 367



Visualization, 368

VLDBs (very large databases), 209

data warehouse and operational systems integration, 291

data warehouse tools, 218

definition, 367

W

WBS (work breakdown structure), 368

Web-based applications, lack of support by users, 119–121

Web sites, click streams, 349

Work breakdown structure (WBS), 368

Workloads, 368

