Symbols

2PC (see two-phase-commit) 235

A
accuracy 69
additivity 17
ad hoc analysis 137
ad hoc star queries 137
advanced modeling 9
aggregate navigation 32, 53
aggregation 17
algorithm 269
analysis and modeling 61
association rule mining (ARM) 257, 261
attribute value decomposition (AVD) 186

B
basic bitmap index 161
BBC (see byte-aligned bitmap code) 166
binning 164
bit-sliced index (BSI) 186
bitmap index tuning 168
BSI (see bit-sliced index) 186
byte-aligned bitmap code (BBC) 166

C
cache approximation query routing 241
canonical schemas 52
chunk-tree representation 147
combustion dataset 171
completeness 69
compression 166
conceptual design 18
conceptual model 122
conceptual modeling 2
consistency 69
contextual data quality 66
controlled requirements expression (CORE) 62
conventional routing strategies 239
convergence 11
CORE (see controlled requirements expression) 62
correctness 242
cost model 206, 217
cross-dimension attribute 10
cube dependence graph 38
cube view 37
currency 69
<table>
<thead>
<tr>
<th><strong>Index</strong></th>
<th><strong>329</strong></th>
</tr>
</thead>
</table>

**D**
- DAG (see directed acyclic graph) 35
- database management system (DBMS) 89, 300
- data communication cost (DC) 217
- data cube 37
- data driven 62
- data mining (DM) 254
- data partitioning 236
- data quality 58, 65
- data replication 236
- data source availability 70
- data warehouse (DW) 1, 88, 203
- data warehouse design 1
- data warehouse operational processes 112
- data warehouses (DWs) 2
- data warehousing 62, 254
- DBMS (see database management system) 89, 300
- DC (see data communication cost) 217
- decisional model 20
- decision support system (DSS) 58, 62
- delay freshness 244
- delta object exchange model (DOEM) 281
- descriptive attribute 10
- DFM (see dimensional fact model) 3
- dimensional fact model (DFM) 3
- dimension attribute 8
- dimension constraint 34, 51-53
- dimension schema 51
- directed acyclic graph (DAG) 35
- DM (see data mining) 254
- DOEM (see delta object exchange model) 281
- domain 73
- drill-down 268
- DSS (see decision support system) 58
- DSS-METRIQ 66
- DW (see data warehouse) 1, 88, 203
- dynamic hierarchies 15

**E**
- EEBSI (see encoded bit-sliced index) 187
- encoded bitmap index (EBI) 185
- encoding 161
- entity/relationship (E/R) 3
- entry point 9
- equality-encoded bitmap 174
- equality encoded bit-sliced index (EEBSI) 187
- ETL (see extraction, transformation, and load) 88, 112, 300
- expected query response time 70
- eXtensible Markup Language (XML) 278
- extraction 119
- extraction, transformation, and load (ETL) 88, 112, 300

**F**
- facts 28, 37, 216
- fact table 37
- FAS (see freshness-aware scheduling) 232
- flow measure 17
- FPR (see fully partitioned replica) 224
- freshness-aware scheduling (FAS) 232, 242
- freshness index by data deviation 244
- frozen dimension 51
- full replica (FR) 222
- fully partitioned replica (FPR) 224

**G**
- GEM (see graphical semistructured temporal data model) 282
- geographical information system (GIS) 299
- global positioning systems (GPS) 301
- global rollback 107
- goal question metric (GQM) 61
- GPS (see global positioning system) 301
- GQM (see goal question metric) 61
- graphical semistructured temporal data model (GEM) 282
- graph morphism 36

**H**
- hash-partition fact and replicate dimensions strategy (PFRD-H) 215
- heterogeneous 36
- hierarchical chunking 147
- hierarchical pregrouping transformation 138

Copyright © 2007, Idea Group Inc. Copying or distributing in print or electronic forms without written permission of Idea Group Inc. is prohibited.
hierarchy 9
hierarchy domain 28, 35, 44
hierarchy schema 28, 35
high-energy physics dataset 171
homogeneous 36
hub 102
hybrid design 236

I

IBIS (see issue-based information system) 61
initial aggregations dictionary 73
initial data dictionary 73
initial requirements 72
intrinsic data quality 66
issue-based information system (IBIS) 61

J

joint application development (JAD) 61

K

knowledge discovery in databases (KDD) 257

L

LAN (see local area network) 203
LC (see local processing cost) 217
loading atomicity 91
local area network (LAN) 203
local processing cost (LC) 217
logical model 122
low bandwidth 208

M

merging cost (MC) 217
metrics 9
middleware 235
modularization 99
motivation 116
multidimensional data model 28
multiple arc 12

N

NCR methodology 62
near real time (NRT) 91
node-partitioned data warehouse (NPDW) 203, 204
nonstandard/complex transformation 91
NPDW (see node-partitioned data warehouses) 203
NPDW (see node-partitioned data warehouses) 204
NRT (see near real time) 91
null element 45

O

O&M (see operation and maintenance) 106
object exchange model (OEM) 281
OLAP (see online analytical processing) 2, 34, 136, 159, 230, 299
OLTP (see online transaction processing) 2, 159
online analytical processing (OLAP) 2, 136, 159, 230, 299
online decision support system 230
online transaction processing (OLTP) 2, 159
operational systems 62
operation and maintenance (O&M) 106
optional arc 12
organizational model 20

P

parallelism 88, 96
parallel join 206
partition and replicate strategy (PRS) 208, 214
partitioned replica (PR) 224
partitioning 93, 206, 213
PFRD-H 215
physical database design 88, 93
physical design alternatives 235
pipelining 88, 96
PMap (see property map) 188
pragmatic approach 66
previous knowledge 239
process driven 62
property map (PMap) 188
PRS (see partition and replicate strategy) 208, 214
PR (see partitioned replica) 224

Q
QFD (see quality function deployment) 61
quality dimensions 73
quality function deployment (QFD) 61
quantifying 63
queries 58
query-dependence 239
query frequency 70
query routing 238

R
ragged (or incomplete) hierarchy 14
range-encoded bitmap indices 173
RC (see repartitioning cost) 217
relational OLAP (ROLAP) 138
reliability/availability 91
repartitioning cost (RC) 217
replication 212, 242
replication for availability 209
requirements elicitation 61
requirements validation 62
right-hand side (RHS) 256
ROLAP (see relational OLAP) 138
roll-up 267
roll-up operation 32, 38
roll-up relation 36

S
scientific approach 65
secondary event 9
self-describing 278
semistructured data 279
shared hierarchies 13
skills acquisition 73
slice 268
snowflake dimension 42
snowflake schema 42
software construction 125
SOLAP (see spatial OLAP) 308
source instability 91
spatial OLAP (SOLAP) 308

Standard Generalized Markup Language 280
star dimension 42, 44
star join 137
star query optimization 151
star query processing 143
star schema 3, 31, 42
star transformation 144
stock measures 17
strict time constraints 91
structural heterogeneity 32
structurally heterogeneous 29
structurally heterogeneous OLAP data 28
structurally homogeneous 29
summarizability 39, 40, 54
system architecture 234

T
temporal data warehouses 284
temporal graphical model (TGM) 281
temporal hierarchy 13
temporal operations 310
temporal semistructured data model 277
TGM (see temporal graphical model) 281
thematic operations 310
time complexity 172
timeliness 69
transaction model 235
transaction routing 240
transportation 119
two-phase-commit (2PC) 235

U
unbalanced (or recursive) hierarchy 15
unbalanced dimension 34, 47
unit measures 17

V
variables 9
version freshness 244
volatility 70

W
WAH code (see word-aligned-hybrid code) 166
WBP (see workload-based partitioning) 215
WBP+JB (see WBP with bitmap join indexes) 216
word-aligned hybrid (WAH) code 166
workflow management 99
workload-based partitioning (WBP) 215

X

XML (see eXtensible Markup Language) 278
XML data warehouse 278
XML Web data warehouses 278