

Index

Symbols

- 2 step walking pattern 234
- 3 step walking pattern 235
- 4 step walking pattern 236

A

- absence of BTr 278
- access point (AP) 247, 303, 314
- accountability 357
- adaptive 295
- additivity 110
- ad hoc application 273
- ad hoc on-demand distance vector routing (AODV) 280
- ad hoc routing protocol 281
- ad hoc traffic identification map (ATIM) 287
- Airspan 139
- algorithm 14
- Alvarion 139
- analog device 139

- aperto network 139
- app developer 133
- attribute caching 193
- auction 107
- Aumann-Shapley (AS) 109, 111
- automatic machine-learning-based pornographic Web site classification 20
- automatic repeat request (ARQ) 291
- automatic system 27
- automatic Web site categorization 24
- axiomatic allocation mechanism 118

B

- backbone data network 3
- basic level services 146
- basic service set (BSS) 303
- battery life 285
- best-effort network 72
- bi-directional SONET network 3
- block byte bit cipher (3BC) 335
- Bluetooth 142
- bootstrapping technique 41

branch-and-bound technique 4
 broadband integrated service digital network (B-ISDN) 144
 broadcasting 200, 293
 bulletin 171
 business organisations 88
 busy tone (BTr) 278

C

cache 58, 60, 188, 193
 capacitated network 3
 carrier rate 5
 carrier sense multiple access (CSMA) 277
 cascaded style sheets (CSS) 58
 cascading strategy 39
 CDMA 134
 circuit switched network 3
 classification algorithm 92
 classification system 24
 classifier architecture 92
 cleaning user movement database phase 221
 click-through model 364
 client-server 89
 client application 153
 clock synchronization 288
 cluster switch gateway routing (CSGR) 280
 cmdSendMessage_Click() 166
 coalition 110
 commission-based model 365
 communication engineering 130
 computing applications 276
 confidence 231
 congestion 57, 76
 congestion-based pricing 104
 congestion distribution mechanism 108
 connected dominating set (CDS) 280
 connectivity 133, 285
 consistency 110
 content provider 133
 cooperative caching 197
 coordinator 288
 cost sharing 109
 cross-validation 41

customer relationship management (CRM) 77, 78
 cut-saturation algorithm 4
 CyberPatrol 45
 cybersitter 45

D

data mining 28, 33, 34, 51
 data mining algorithm 51
 database 240
 data caching 188
 data collection 59
 data delivery 152
 data preparation 34
 data processing 162
 data source 153
 data traffic 70
 delay 71
 dense network 2
 device manufacturer 133
 device mobility 131
 digital enhanced cordless telecommunications (DECT) 134, 136, 141
 digital fingerprint 353
 diminishing weight schedulers 107
 direct sequence spread spectrum (DSSS) 303
 display 133
 doctor 154
 domain name servers (DNS) 57
 domain name system (DNS) 355
 dominating set 280
 DSL 142
 dual busy tone multiple access (DBTMA) 278
 dynamic destination-sequenced distance-vector (DSDV) 280
 dynamic source routing (DSR) 280

E

ear 132
 eavesdropping 304
 e-mail 347
 emergency services 275

end-to-end delay 284
 energy-efficient 281
 ensemble communication 139
 enterprise information 88
 enterprise resource planning (ERP) 68,
 75, 78, 80, 89, 95
 ethereal 318
 European Telecommunications Standards
 Institute (ETSI) 138
 evaluation of alternatives 95
 exclusive ORed (XOR) 305
 exogenous variables 28
 extended service set (ESS) 303
 eXtensible Markup Language (XML) 355

F

F_2^m 328
 fair queuing 108
 filtering system 20
 first time retrieval 60
 fisheye state routing (FSR) 280
 fixed Internet company 133
 flexibility 134
 floor acquisition multiple access (FAMA)
 277
 footprinting 308
 forward error control (FEC) 291
 Fp 328
 fragmentation of information 88
 French Ministry of Education 21
 frequency hopping spread spectrum
 (FHSS) 303
 frequent walking sequence phase 223
 Fujitsu 139
 future public land mobile telecommunica-
 tions system (FPLMTS) 144

G

general packet radio system (GPRS) 134
 geocasting 293
 geographical routing algorithm (GRA)
 290
 geographic distance routing (GEDIR) 290
 global cache hit 198
 global cache miss 198

global error rate 24, 41
 global message 151
 global positioning system (GPS) 212,
 276, 308
 graph-theoretic heuristics 5
 greedy perimeter stateless routing (GPSR)
 290
 GSM 134

H

hacking 313
 Hamilton circuit 9
 handset 133
 hashcash 346
 hashcash-based solution 346
 HCI guidelines 55
 height 133
 HELDKARP 13
 heterogeneity of applications 106
 heuristic 13
 heuristic procedure 9
 hierarchical cluster-based routing 279
 high level application 147
 high multimedia 146
 HiperLAN 246
 HiperLAN2 246
 home networking 275
 HomeRF (HomeRF) 141
 HTTP protocol 58
 HTTPS protocol 78
 hybrid approach 356
 hybrid caching 193
 hybrid optoelectronic ring network (HOR-
 NET) 15
 hybrid routing 279
 hyper elliptic curve cryptosystem (HECC)
 328
 hyper text transfer protocol (HTTP)
 57, 305

I

IEEE 802.11b 244
 image compression 58
 IMT-2000 134
 independent basic service set (IBSS) 303

infrared (IR) 140
 Infrared Data Association (IrDA) 140
 infrared radiation (IR) 141
 initialisation vector (IV) 304, 305
 Institute of Electrical and Electronics
 Engineers Standards Association
 (IEEE-SA) 142
 integrity check value (ICV) 305
 Intel 139
 interactive high multimedia 146
 interest database building phase 221
 interference 285
 intermediate node 228
 international mobile telecommunication
 144
 International Telecommunication Union
 (ITU) 2, 141
 Internet 129, 131
 Internet content selection (PICS) 24
 Internet control message protocol (ICMP)
 57
 Internet explorer 45, 318
 Internet infrastructure 57
 Internet packet exchange (IPX) 305
 Internet protocol (IP) 68, 70, 355
 interoperability 294
 invalidation report (IR) 202
 invalidation strategy 202
 IP address 56

J

JANET infrastructure 63
 JPEG 61

K

k-dominating set (k-CDS) 281
 k-nearest-neighbor (kNN) 195
 KB data transfer 188

L

LAGDUA 13
 LAGDUAL 13
 Lagrangian heuristic 13
 Lagrangian relaxation 4, 5
 Lagrangian solution 14

LAN 75
 landmark ad hoc routing protocol (LAN-
 MAR) 280
 latency 60, 90
 leases file caching mechanism 193
 Legal 357
 local cache hit 198
 local cache miss 198
 local view 283
 location 212
 location-aided routing (LAR) 290
 location-aware routing 290
 location-based services 276
 location-independent service 132
 location dependent query 191
 location movement database 236, 240
 location movement database (LMD) 233
 location of interest (LOI) 214, 231, 240
 location of movement 231
 location updating 292
 logo image discrimination 47
 loop 159

M

MAC layer 277
 man-in-the-middle (MITM) 309
 market 25, 74, 132
 mass market 94
 maximum lifetime protocol 286
 maximum segment size (MSS) 56
 measurement-based admission control
 (MBAC) 108
 media type 130
 medium multimedia 146
 mesh network 276
 messaging 146
 metadata 27
 method 212
 methodology 59
 metropolitan area network (MAN) 8, 14,
 75, 249, 265
 Microsoft® eEmbedded Visual Basic® 3.0
 155
 Microsoft® Pocket PC 2002 155
 Microsoft® Visual Basic® 6.0 155

- Microsoft® Windows™ 2000 155
 - Microsoft Access® database 153
 - military applications 276
 - min-confidence 235
 - miniaturization 131
 - minimal overhead 281
 - minimum transmit power protocol 285
 - mission-critical ERP systems 68
 - mobile ad hoc network (MANET) 272
 - mobile commerce 276
 - mobile communication 129
 - mobile computing 152, 188
 - mobile conferencing 275
 - mobile device 212
 - mobile information system 157
 - mobile multimedia 128
 - mobile narrow-band data service 132
 - mobile network 128
 - mobile terminal manufacturer 132
 - mobile user 212
 - mobile user database static object mining (MUDSOM) 218
 - mobile user 212
 - mobility 294
 - monotonicity 110
 - movement database conversion phase 221
 - multicasting 293
 - multicommodity 1, 14
 - multimedia 57, 131, 134, 145
 - multimedia messaging service (MMS) 145
 - multiple access with collision avoidance (MACA) 277
 - multiple access with collision avoidance by invitation (MACA-BI) 278
 - multiple access with collision avoidance for wireless LANs (MACAW) 277
 - MYL learning dataset 31, 39
 - MYL test dataset 23, 41
- N**
- nearest neighbor (NN) 13, 195
 - neighbor discovery 288
 - NeoTrace Express 60
 - NetNanny 45
 - network architecture 4
 - network capacity 284
 - network congestion 70
 - network delay component 56
 - network idiosyncrasies 60
 - network interface card (NIC) 247
 - network operator 133
 - network partitioning 288
 - network resource planning (NRP) 95
 - network traffic 90
 - network vendor 75
 - news bulletin 171
 - New Zealand Trade and Enterprise (NZTE) 245
 - New Zealand Wireless Data Forum (NZ-WDF) 249
 - node 283
 - node-disjoint route pairs 8
 - Nokia 139
 - nonpornographic Web sites 23
 - Norton Internet Security 45
 - NP-hard 7
 - NRENs infrastructure 60
- O**
- object 193, 212
 - OEM product 132
 - OFDM forum 139
 - on-air strategy 200
 - operating system file 313
 - optimized link state routing (OLSR) 280
 - orthogonal frequency division multiplexing (OFDM) 137
- P**
- packet loss rate 284
 - path maximum transmission unit discovery (PMTUD) 56
 - patient 154
 - PC 313
 - PDA 260
 - PDC 134
 - peer to peer (P2P) 197, 273
 - percentage of total skin colour pixels 39
 - persistent storage 133
 - person 212
 - person-machine interface 131
 - personal area 275

- personal area network (PAN) 246
 - personal digital assistant (PDA) 144, 154, 155, 212
 - pixel per bits 133
 - PMTUD schemes 64
 - PNG 61
 - pocket PC 155
 - point of presence (POP) 2
 - political evolution 351
 - pornographic Web site 23, 24
 - posteriori error rate 41
 - power-aware multi-access protocol with signaling (PAMAS) 286
 - power management 294
 - power save protocol 286
 - predictive attribute 28
 - primary path 3
 - priori error rate 24, 41
 - priority fair queuing (PFQ) 108
 - proactive routing 279
 - processing 133
 - progressive second-price (PSP) 107
 - proliferation 21, 27
 - proof-of-work 347
 - proxim 139
 - public hotspot 275
 - pull 276
 - pull based environment 199
 - pull mechanism 152
 - PureSight 45
 - push 151, 152, 200, 276
- Q**
- quality-of-service (QoS) 68, 71, 73, 75, 80, 105, 135, 138, 284, 290
 - query 152, 193
- R**
- radio frequency (RF) 138, 140
 - radio network 132
 - random error rate technique 41
 - range query 195
 - rate inverse scheduling (RIS) 107
 - reactive routing 279
 - ready to receive (RTR) 278
 - relative distance microdiversity routing (RDMAR) 280
 - relaying overhead 285
 - reliability 1, 294
 - remote 154, 191
 - requirements 133
 - rescaling invariance 110
 - resource reservation protocol (RSVP) 59
 - response time 60, 71, 283
 - retrieveRecord() 159
 - rivest code (RC) 305
 - robust security network (RSN) 137
 - route discovery 289
 - route maintenance 289
 - routing 3, 292
- S**
- scalability 283, 294
 - second-generation (2G) 134
 - secondary path 3
 - secure electronic transaction (SET) 329
 - secure hash algorithm (SHA) 328
 - security 293
 - security measure 302
 - SEEP 328
 - self-healing ring 2
 - self-organizing 295
 - semantic caching 193
 - SendData method 161
 - server application 153
 - server strategy 199
 - service evolution 132
 - service mobility 131
 - service set identifier (SSID) 303
 - sexology 24
 - Shapley Value (SV) 113, 114
 - shared wireless access protocol (SWAP) 141
 - signal-to-noise (S/N) 303
 - simple mail transport protocol (SMTP) 347
 - skin-color model 33
 - skin color related visual content-based analysis 33
 - small office/home office (SOHO) 302, 319, 320

small to medium enterprise (SME) 69
 social evolution 351
 source tree adaptive routing (STAR) 280
 spammer 364
 speech-oriented communications 131
 SQL query 159
 SQL query string 159
 SSID 260
 SSL 260
 state-of-the-art section 23
 stateful server 193
 stateless server 193
 static group pattern mining (SGPM) 218
 statistical analysis 354
 strategy of homogeneity 37
 strData() 159
 strData() array 161
 streaming 145
 strong walking pattern phase 223
 strRetrieveBuffer() 162
 strRetrieveBuffer() array 161
 structural content 31, 32
 subgradient 13
 supply chain management (SCM) 77, 78
 support 231
 support for multimedia 294
 survivability 1
 switched data 146
 synchronous digital hierarchy (SDH) 2
 synchronous optical network (SONET) 2

T

TCP/IP network 89, 154
 TCP tunnel 57
 TD-SCDMA 134
 TDMA 134
 technology 74, 134, 351, 357
 Telecommunications Management Group,
 Inc. (TMG) 129
 temporally ordered routing algorithm
 (TORA) 280
 terminal reliability (TR) 1, 4
 terminal service environment 93
 TG3 (high rate) 142
 TG4 (low rate) 142
 third-generation (3G) 142, 144

third-generation partnership project
 (3GPP) 135
 time division multiplexing scheme 3
 timing 212
 top level domain (TLD) 56
 topological design 3
 topology 3
 topology broadcast based on reverse path
 forwarding (TBRPF) 280
 traceability 357
 transformation phase 221
 transmission 131
 transmission control protocol (TCP) 57
 transmission range 131
 transmit-busy tone (BTt) 278
 transmit power control protocol 285
 trusted e-mail open standard (TEOS) 356

U

uncapacitated network 3
 user mobility 130
 user movement database (UMD) 213,
 214, 221, 240
 UWC 134

V

value added services 147
 vehicle manufacturer 132
 vehicle terminal manufacturer 132
 vendor 74
 Vickrey-Clarke-Groves (VCG) 106
 virtual backbone 280
 virtual cluster 281
 voice 146
 VoIP 70

W

walking pattern 219, 223
 war driving 310
 wavelength division multiplexed (WDM)
 4
 Web-enabled ERP solution 78
 Web crawler 33
 WebGuard 20
 WebGuard-TS 38

- WebGuard-V 38
 - Web page 56, 65
 - WEP 247
 - WEP security protocol 306
 - Wi-Fi 138, 244
 - Wi-LAN 139
 - wide area network (WAN) 14, 70, 75, 78, 249, 265
 - wideband CDMA (WCDMA) 135
 - width 133
 - WiMAX 139
 - wired equivalent privacy (WEP) 247
 - wired equivalent protocol (WEP) 304
 - wireless ad-hoc network 155
 - wireless asynchronous transfer mode (wireless ATM) 246
 - wireless computing 151
 - wireless local area network (WLAN) 244, 245, 273, 304, 307
 - wireless MAN 265
 - wireless network 129
 - wireless personal area network (WPAN) 142, 273
 - wireless routing protocol (WRP) 280
 - wireless wide area network (WWAN) 273
 - World Wide Web Consortium 58
 - wormhole attack 292
 - wskTCP(2) 162
 - wskTCP_DataArrival() 161
- X**
- eXtensible Markup Language (XML) 355
- Z**
- zone-based protocol 290
 - zone routing protocol (ZRP) 280