Index of Key Terms

Symbols

“Alt” String 307
10 Gigabit Ethernet 54
1G 971
2.5G 971
2G 971
2.5G 971
3G 972
3GPP 972
3GPP2 972
4G 972

A
Acceptable-Use Policy (AUP) 908
access 466, 1000
cost 854, 908
network 543
point device 505
rights management 854
accessibility 232, 1012
action research 943
active learning 135, 784
activity logging 908
ad-hoc network 881, 972
ADL/SCORM ADLNet (Advanced Distributed Learning Network) 935
admission control 323
adoption 6
factors 473
ADSL 48
advance organizer 709
aesthetic integrity 1012
affective computing 13
affinity communities 1046
AFX 862
agent 614, 916
attributes 614
framework 21
agile development methodologies 246
AHS 820
AICC (Aviation Industry CBT [Computer-Based Training] Committee) 935
ambient intelligence 313
anchored learning instructions 94
annotation 695, 1076
antivirus software 569
AOA or Angle of Arrival 636
AOL 1038
Apache 1076
APON or Broadband PON (APON/BPON) 334
application 761
layer 659
outsourcing 35
ARPAnet 1038
articulatory synthnetworks 395
ASP (Application Service Providers) 35
assertion of copyright 789
association rules 702
asymmetric DSL (ADSL) 554
asynchronous 1090
communication 524
digital subscriber line (ADSL) 328
distance delivery 224
transfer mode (ATM) 328, 367, 835, 955
attack
signature 755
vs. Intrusion 499
attitude
toward the ad (Aad) 108
toward the site (Ast) 109
attribution 789
Index

VOD 327
voice 220
voice over IP 324
voice recognition 58, 72
voiceprint 64
VoIP 324
voluntary cooperation 297
VRML 856
vulnerabilities 910, 1105

W

WAAS 153
walk through 743
WAP (Wireless Application Protocol) 296, 1021
gap 617
watermarking 204, 382
WCDMA 315
wearable communities 1036
Web
access 500
application 426
bugs 481
collaboration 83
community 937
conferencing 86, 138
logs 865
site 1078
student 778
usability 1010, 1078
-based (WBT) 738
distance learning 882
hypermedia systems 173
learning 1084
teaching/learning 974
webometrics 1091
procedures 1092
weighted-least-squares 186
WEP 1111
Wi-Fi 1104
wide-area 647
window methods 186
ired Equivalent Privacy (WEP) 617
wireless 1106
access protocol 624
application protocol (WAP) 648
commerce 980
communications 623
device 295
emergency call service 1096
local area networks 646, 998
middleware 625
mobile devices 708
network(s) 123, 622
technology 165, 500
terminals 970
WLANs 165, 646, 998
WML 1024
World Wide Web 418, 697, 742, 917, 1055
worm/virus 405
WWW 917, 1091

X

X3D 856, 1030
Xerox’s Palo Alto Center 744
XML 112, 1030

Z

z-transform 183
zeros 184
zone of proximal development 90, 1061
zooming 111
audiographic communication  224
audio teleconferencing  224
auditory icon  347
augmented reality  374
authentication  61, 68, 75, 172, 854, 955, 1000
  system  908
authoring tool  935
authorization  854, 1000
automated port scan  955
automatic facial expression analysis  313
autonomous software agent  21
autopoietic system  868
availability  403
Avatar  426, 592, 840

B
balanced scorecard (BSC)  584
bandwidth  48, 172, 293, 328, 422, 554, 659
banner  88
base station
  controller (BSC)  150
  transceiver (BTS)  150
baseband  203
Baud  422
BBA  862
behavioral biometric  62
behaviour aggregates (BA)  874
benchmark audiovisual affect database  13
benefit function  776
BIFS  862
binary image  769
biometric(s)  6162, , 68, 75, 410
  encryption  68
B-ISDN (Broadband Integrated-Services Data Network)  367
bit
  depth  276
  rate  777
Block Data Hiding Method (BDHM)  769
Bluetooth  172, 301, 651, 972, 984
Bookshelf  723
Boolean Query  122
brand  101
B-Rep  1032
broadband  163, 334, 422, 436, 554, 659
  access  48, 81
  networks  29
  transmission  81
  wireless access  81
broadcast TV services  686
broadcast  517
browse  282
browser  423, 1082
BS  323
BS7799-2:2002  848
BSS  1112
burst(s)  806
  assembly  805
  offset  806
business
  games  537
  performance  416
  strategy  416
  system planning (BSP)  902
  -continuity planning  403
C
cable access  81
cache  736
CAD (Computer Aided Design)  427, 1032
CAP  48
caption  307
carrier  203
  -neutral collocation facilities  163
case study  936
CBT  741
CDMA  972
CDMA-2000  972
CDPD  972
cellular
  communication  643
  network  659
  value-added service categories  584
central route to persuasion  269
CERN  868
CERT/CC©  499
certificate authority  854, 1112
CGI  1077
characteristics of virtual communities  1046
chat  950
chief information security officer  902
CIF (Common Interface Format)  777
circuit
  switched  293
  switching  651
client  761
  -server model  614, 881
clip  736
<table>
<thead>
<tr>
<th>Term</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>cluster</td>
<td>695</td>
</tr>
<tr>
<td>clustering</td>
<td>828</td>
</tr>
<tr>
<td>CMC</td>
<td>94</td>
</tr>
<tr>
<td>CMCS</td>
<td>524</td>
</tr>
<tr>
<td>CMT</td>
<td>94</td>
</tr>
<tr>
<td>coaction field</td>
<td>374</td>
</tr>
<tr>
<td>Codec</td>
<td>276</td>
</tr>
<tr>
<td>coefficient of determination</td>
<td>784</td>
</tr>
<tr>
<td>cognitive theory</td>
<td>741</td>
</tr>
<tr>
<td>coherence bandwidth</td>
<td>323</td>
</tr>
<tr>
<td>collaborative learning</td>
<td>381</td>
</tr>
<tr>
<td>collaborative thinking</td>
<td>531</td>
</tr>
<tr>
<td>collective action</td>
<td>902</td>
</tr>
<tr>
<td>colocation</td>
<td>524</td>
</tr>
<tr>
<td>color histogram</td>
<td>41</td>
</tr>
<tr>
<td>commercial off-the-shelf (COTS) applications</td>
<td>178</td>
</tr>
<tr>
<td>common costs</td>
<td>150</td>
</tr>
<tr>
<td>community</td>
<td></td>
</tr>
<tr>
<td>network/civic network (CN)</td>
<td>943</td>
</tr>
<tr>
<td>of practice (CoP)</td>
<td>531, 943, 1063</td>
</tr>
<tr>
<td>-centered development (CCD)</td>
<td>943</td>
</tr>
<tr>
<td>competitive thinking</td>
<td>531</td>
</tr>
<tr>
<td>compression</td>
<td>979</td>
</tr>
<tr>
<td>computer</td>
<td></td>
</tr>
<tr>
<td>assisted instruction (CAI)</td>
<td>1090</td>
</tr>
<tr>
<td>-managed instruction (CMI)</td>
<td>1090</td>
</tr>
<tr>
<td>-mediated communication (CMC)</td>
<td>241, 730, 840, 950</td>
</tr>
<tr>
<td>-mediated communication/computer-supported collaborative work</td>
<td>1063</td>
</tr>
<tr>
<td>-mediated education (CME)</td>
<td>1090</td>
</tr>
<tr>
<td>concatenative synthesis</td>
<td>962</td>
</tr>
<tr>
<td>concept map</td>
<td>709</td>
</tr>
<tr>
<td>concurrent models with an object-oriented approach</td>
<td>676</td>
</tr>
<tr>
<td>conditional access (CA) services</td>
<td>686</td>
</tr>
<tr>
<td>condominium fibre</td>
<td>163</td>
</tr>
<tr>
<td>confidence</td>
<td>702</td>
</tr>
<tr>
<td>confidentiality</td>
<td>75, 403, 1000</td>
</tr>
<tr>
<td>congestion control</td>
<td>323</td>
</tr>
<tr>
<td>conjoint analysis</td>
<td>6</td>
</tr>
<tr>
<td>connected models with an object oriented approach</td>
<td>676</td>
</tr>
<tr>
<td>constraints</td>
<td>676</td>
</tr>
<tr>
<td>constructivist perspective</td>
<td>135</td>
</tr>
<tr>
<td>consumer context</td>
<td>129</td>
</tr>
<tr>
<td>contact</td>
<td>466</td>
</tr>
<tr>
<td>content</td>
<td></td>
</tr>
<tr>
<td>analysis</td>
<td>592</td>
</tr>
<tr>
<td>management</td>
<td>115</td>
</tr>
<tr>
<td>repurposing</td>
<td>115</td>
</tr>
<tr>
<td>-based access</td>
<td>41</td>
</tr>
<tr>
<td>-based retrieval</td>
<td>22, 715</td>
</tr>
<tr>
<td>content-driven services</td>
<td>686</td>
</tr>
<tr>
<td>context</td>
<td></td>
</tr>
<tr>
<td>of use</td>
<td>1019</td>
</tr>
<tr>
<td>-aware technologies</td>
<td>1102</td>
</tr>
<tr>
<td>-sensitive HCI</td>
<td>13</td>
</tr>
<tr>
<td>control</td>
<td></td>
</tr>
<tr>
<td>measures</td>
<td>894</td>
</tr>
<tr>
<td>objectives for information and related technology (COBIT)</td>
<td>848</td>
</tr>
<tr>
<td>packet (or Bburst header packet or setup message)</td>
<td>806</td>
</tr>
<tr>
<td>controlled vocabulary</td>
<td>307</td>
</tr>
<tr>
<td>controlling</td>
<td>510</td>
</tr>
<tr>
<td>controls</td>
<td>403</td>
</tr>
<tr>
<td>convergence</td>
<td>577</td>
</tr>
<tr>
<td>factor</td>
<td>579</td>
</tr>
<tr>
<td>index</td>
<td>578</td>
</tr>
<tr>
<td>COO cell or origin</td>
<td>636</td>
</tr>
<tr>
<td>cookie(s)</td>
<td>479, 485</td>
</tr>
<tr>
<td>copper line</td>
<td>554</td>
</tr>
<tr>
<td>copyleft</td>
<td>789, 797</td>
</tr>
<tr>
<td>copyright</td>
<td>561, 790</td>
</tr>
<tr>
<td>correlation coefficient</td>
<td>784</td>
</tr>
<tr>
<td>country code top level domain (ccTLD)</td>
<td>1094</td>
</tr>
<tr>
<td>courseware</td>
<td>936</td>
</tr>
<tr>
<td>cover work</td>
<td>389</td>
</tr>
<tr>
<td>crackers</td>
<td>410</td>
</tr>
<tr>
<td>CRC (Cyclic Redundancy Check)</td>
<td>323</td>
</tr>
<tr>
<td>CRISP-DM (Cross-Industry Standard Process for Data Mining)</td>
<td>702</td>
</tr>
<tr>
<td>critical digital-mass index</td>
<td>578</td>
</tr>
<tr>
<td>CRM (Customer Relationship Management)</td>
<td>35, 578</td>
</tr>
<tr>
<td>cross-correlation</td>
<td>323</td>
</tr>
<tr>
<td>cryptography</td>
<td>389, 410</td>
</tr>
<tr>
<td>CSCL</td>
<td>381</td>
</tr>
<tr>
<td>CSCW</td>
<td>1026</td>
</tr>
<tr>
<td>CSG</td>
<td>1032</td>
</tr>
<tr>
<td>CSMA</td>
<td>607</td>
</tr>
<tr>
<td>current cost</td>
<td>150</td>
</tr>
<tr>
<td>customer lifetime value (CLV)</td>
<td>676</td>
</tr>
</tbody>
</table>
Index of Key Terms

CVE 916

cyclic graph 1032

D

dark fibre 164
data
  hiding 769
  integrity 75, 1000
  mining 307, 395, 479, 702
  tampering 955
database management system (DBMS) 276
dataveillance 702
DBA 289
deadlinks 1082
decision rule 695
decoder 436
Deixis 307
denial-of-service (DOS) attacks 908
dense-wavelength division multiplexing (DWDM) 164
developing countries 453
device 761
dialect 466
dialogue 858
differential correction 351
differentiated services (DiffServ) 874
diffusion 6
digital
certificate 485, 854
divide 1095
filter 195
imaging and communications in medicine (DICOM) 403, 828
rights management (DRM) 812
signal 195
  processing 195
signature 854
subscriber line (DSL) 81, 328, 423
television (DTV) 203, 517, 686
video broadcasting (DVB) 203, 686
watermark 211
  watermarking 389
directed instruction 135
directional relation 264
dispersed/distributed teams 232
distal context 129
distance
  education 1090
  learning 886, 1090
distanced leadership 232
distributed
e  
  environment 446, 665
  models with an object-oriented approach 676
DMT 48
DoCoMo 341
domain name 1095
DSL (Digital Subscriber Loop) 55, 554
DSSS 972
dynamic Web pages 1082
E

EAP 1112
Earcon 347
economic risks 894
EDGE (Enhanced Data for GSM Evolution) 294, 972, 367
EDI (Electronic Data Interchange) 341
EFM Fiber 334
Egress Filtering 755
e-journal 723
elaboration likelihood model 270
e-learning 55, 276, 493, 741, 820
  (distance learning, Web-based learning, online learning) 1054
  process 936
electronic
catalogs 246
commerce (e-commerce or EC) 101, 109, 246, 282, 628, 984, 1012
customer relationship management (eCRM) 676
data interchange 282
  fund transfers 282
  media 357
elementary entity 695
e-marketplace 894
emergent behavior 21
emotional intelligence 13, 524
EMS 301
encapsulation 659
encoding 276
encrypting 769
encryption 172, 955
enhanced TV 686
enrolment 68
entertainment 109
  service 584
environmental Factors 473
Index of Key Terms

Ephemeris Data Parameters 156
Eriksson-Penker Process Diagram 677
ERP (Enterprise Resource Planning)35
ESS 1112
Ethernet frame 289
Ethernet PON (EPON) 334
European Telecommunications Standards Institute (ETSI) 203
ex ante predictors of student performance 784
experiential learning 537
experiment 592
expert systems 395
exploit 499
external support 510

F

face-based interface 313
fair information practices (FIP) 479
false
acceptance 68
rate 62
rejection 68
rate 62
FBA 862
feature extraction 122
FHSS 972
fiber optic cable 328
-to-the-home (FTTH) 334
file formats 518
finance service 584
finite elements method 427
FIPA 916
FIR filter 195
firewall 410, 755, 956, 1000
flash 886
flow 874
forking 798
formant 962
synthesis 963
forward error correction 48
forwarding equivalence class (FEC) 874
forward-looking long-run incremental costs 543
fragile watermarking 218
fragmentation 499
frame rate 276
relay 956
size 276
free riding 812
freely available 790
frequency-division multiplexing 48
front and back region 357
FTP 381, 868, 1038
FTTx 164
fully interactive video 1090

G
general public license (GPL) 561, 790
generally accepted system security principles (GASSP) 848
generic Top Level Domain (gTLD) 1095
genetic algorithm 29
geostationary satellite (GEO) 351
Gigabit PON (GPON) 334
GIS or geographical information systems 636
global
popularity 736
system for mobile communication (GSM) 150
systems mobile (GSM) 991
globalization 950
globalize 101
GNU 561
GOMS 1019
Google AdWords 270
GPRS 294, 972
GPS (Global Positioning System) 607, 1038
grayscale image 203
GSM (Global System Mobile) 294, 636, 651
GSMC 972
guidelines 518
for the management of IT security (GMITS) 848

H

H.323 55
hackers 410
haptics 840
HASP (High-Altitude Stratosphere Platform) 367
heterogeneous agents 21
heuristic rule 21
hierarchical conjoint analysis 7
high
-context culture 241
-definition television (HDTV) 203
historical costs 150
history retrieval 446
home page (portal) 1054
homogeneous agents 21


5
Index of Key Terms

host-multicast 881
  routing protocol 881
HTML 307, 979, 1077
HTTP 1077, 1095
human
  capital 525
  -computer interaction (HCI) 13, 537, 1012
  -computer interface 13
HyperClass 374
  HyperLecture, HyperSeminar, HyperTutorial 1068
hyperlinks 1082
hypermedia 178, 460
HyperReality 374
HyperSchool, HyperCollege, HyperUniversity 1068
hypertext 178, 460
HyperWorld 374
I
IBSS 1112
ICAT 916
ICMP Message (Internet Control Message Protocol) 755
ICR (intelligent call routing) 88
identification 75, 232
idiomatic expression 466
IDS (intrusion-detection system) 755
IEEE 802.1x Standard 908
IEEE LTSC (Learning Technologies Standards Committee) 936
IIR Filter 195
IM (instant messaging) 88, 991
image
  classification 702
  clustering 702
  copyrights 212
  indexing 264, 703
  mining 703
  retrieval 703
IMARC 991
i-Mode 991, 301
imperceptible 212
implementation risks 894
impulse response 195
incentive regulation 543
incremental
  cost 150
  development 179
index 715
individual
  critical mass 7
  learning 381
info pyramid 1006
information
  and communications technology (ICT) 453
  architecture 1082
  delivery theory 741
  hiding 389
  requirement elicitation (IRE) 129
  retrieval (IR) 715
  security 902, 1000
    management 395
    policy 902
  service 584
  technology 840
  visualization 1026
  -security-management system (ISMS) 403
informativeness 109
informed embedding 218
innovation factors 473
input debugging 755
inquiry style 1054
installed base 7
instructivist perspective 135
integrated services (IntServ) 874
integrated services digital network (ISDN) 423, 460
integrity 403
intellectual
  capital 1063
  property (IP) 790
intelligent
  agent 614
    technology 395
  algorithms 30
  software agent 709
interaction 246
  channel (IC) 203
interactive
  advertising 109
  digital multimedia 179
  learning 460
  multimedia method (IMM) 460
  multimedia techniques 453
  services 686
  system(s) 246, 1012
  television 436
interactivity 135, 436, 886
intercultural communication competence 241
Index of Key Terms

interface 537, 709, 979
intermedia Transcoding 1006
internal Context 129
international
  outsourcing 798
  standards organisation (ISO) 848
  virtual office (IVO) 466
internationalization 950
internationalize 101
Internet 423
  adoption 473
  host 1095
  hyperlink (or hypertext link) 1095
  protocol (IP) 282, 328
  service provider (ISP) 423, 600, 755
  streaming 277
interoperability 493
interpolation 427
interpretation 950
interstitial 88
intonation 963
intranet 282
intrusion
  detection 755, 902
  prevention 755
  tracking 755
investment 505
ionosphere 157
IP 172, 600
  multicasts 55, 881
  traceback 755
  -multicast routing protocol 881
irreveracity 68
irritation 109
ISDN 956
ISO 1020
ISO 17799 902
ISO 9241 1012
ISO Norm 1032
ISO/IEC 17799 848
isochronous 703
IT
  alignment 416, 510
  implementation success 416
  strategy 416
ITS 820
J
JADE 916
JITAITS 1068
K
Kbps 294
Kerberos 908
key frame(s) 115, 703
killer app 812
knowledge 358
  building 95
  discovery in databases 703
  management 531, 1054
L
LAAS 156
label 874
  swapping 874
LAN 600, 835
last mile 543
LDT 363
leader-led e-learning 741
leading 510
learner model 820
learning
  community 95, 1063
  management Systems (LMS) 936
  network 531
  object(s) 256, 709, 820, 886
  or information ecology 95
  style 709, 886
  -object metadata (LOM) 256, 493
least significant bit (LSB) 389
licensing domain 790
light weight IDS 499
limit conjoint analysis 7
line 544
linear predictive coding 963
lip reading 313
LITEE (Laboratory for Innovative Technology and Engineering Education) 723
live update 569
LLID 289
LM or the location manager 636
LMS 820
LO 741
local
  access 544
  area radio network 651
  loop 544, 554
  network 544
Index of Key Terms

popularity 736
  telecommunications market 544
  -area network (LAN) 164
localization 628, 950
localize 101
logging 499
LOM 820
lossy compression 218
low
  - earth orbit (LEO) 351
  - context culture 241
  - definition television (LDTV) 203
Lurker 841

M

MAC (Medium Access Control) 367, 607
machine
  interactivity 730
  learning 313, 499
  translation (MT) 950
  vision 314
macromedia flash 979
magnitude response 195
main distribution frame (MDF) 554
MAN 600
management support 473, 510
MANET 607
MAS 916
mass-spring system 427
m-business 628
media search engine 307
mediated interaction 358
message
  sensation value 270
  - based service 584
metacognition 95
metadata 307, 923
Metcalfe’s Law 1095
metric relation 264
metropolitan-area network (MAN) 164
micro
  Browsers 1020
  / macro payment 621
microbrowser 115
microelectromechanical systems (MEMSs) 984
middleware 55
mixed media 723
m-learning 820, 1026
MLSE 3230
MMS 301
MMSE 323
MMT 741
mobile
  agent 614
  commerce (m-commerce) 301, 621, 505, 628, 643
  security 621
  computing 628
data services (MDS) 991
device(s) 628, 644, 709
HCI 1026
IPv6 294
learning (m-learning) 709
location based services 636
multimedia 644
payment 621
phones 972
switching center (MSC) 150
mobility 628
modality 347
mode 347
modeling 446, 664
modern 48
morphing virus/polymorphic virus 569
movie 723
m-payment 628
MP3 703
MPCP 289
MPEG 48, 703, 862, 1006
MPEG-1 1006
MPEG-2 203, 1006
MPEG-21 1006
MPEG-4 81, 703, 777, 1007
MPEG-7 703, 1007
MPLS 1007
MPQoS (Mean Perceived Quality of Service) 777
m-security 628
MUD 592
MUD object oriented (MOO) 423
MUD/MOO 841
multi-agent system (MAS) 21, 614
multicast 460
  transport protocol 881
multimedia 136, 179, 665, 709, 723, 979
  communication 686
data mining 703
database(s) 41, 277, 715
document 264, 715
home platform (MHP) 203
Index of Key Terms

information retrieval (system) 715
  service 436
  transmission 30
multimodal 347
multimodal (natural) HCI 14
multi-modality 715
multipath propagation 323
multiple channel per carrier (MCPC) 453
multiple service operators (MSOs) 328
Multiplex 651
multiuser dimension/multiuser domain (MUD) 423
municipal fibre network 164
MVNO 301

N
namespace 924
narrowband 335
national culture 241
natural monopoly 544
near-far effect 323
need
  context 129
  -to-know access policy 902
Netiquette 525
netnography 592, 1046
network 246, 423, 761, 1000
  architecture 806
  effects 7
  interface card (NIC) 505
  intrusion 755
  layer 659
  service providers 35
networked mobile digital devices (NMD) 991
neural network 212
non-repudiation 68, 75, 1000
NPV 505

O
object recognition 703
objective measurement of PQoS 777
OELE 136
OLT 289
one-way reservation schemes 806
online 666
  community 944
  community of practice 944
  discussion board 784
ontologies 493
ontology 924
ONU 289
open
  knowledge initiative (OKI) 256
  source 790
    licensing model 790
    software 499, 561, 790, 798
OpenGL ES 862
operationally critical threat asset and vulnerability evaluation (OCTAVE) 848
operator 761
optical
  attenuation 835
  cross-connect (OXC) 806
  line terminal (OLT) 335
  network terminal (ONT) 335
  window 835
  -access network (OAN) 164
opt-in/opt-out 479
option 506
organisational factors 474
organising 510
organization for economic co-operation and development (OECD) guidelines 479
organizational culture 241
outcome-relevant involvement 270
out-of-the-box experience (OoBE) 991
overlay network 813
ownership 790
ownership by contract 790

P
packet 172
  switched 294
  switching 651
pan 115
participatory design 944
partition 769
passive optical network (PON) 335
patch 1000
PBX 600
PDA (personal digital assistant) 115, 636, 991, 1026, 1037
peer review method 381
Peers 868
peer-to-peer (P2P) network 607, 881
per-hop-behaviour (PHB) 874
peripheral
  cue 270
<table>
<thead>
<tr>
<th>Index of Key Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>complexity 270</td>
</tr>
<tr>
<td>route to persuasion 270</td>
</tr>
<tr>
<td>personal</td>
</tr>
<tr>
<td>area radio network 651</td>
</tr>
<tr>
<td>WES 1102</td>
</tr>
<tr>
<td>Petri Nets 446, 485</td>
</tr>
<tr>
<td>phase response 196</td>
</tr>
<tr>
<td>phishing 410, 485</td>
</tr>
<tr>
<td>phonetics 963</td>
</tr>
<tr>
<td>phonology 963</td>
</tr>
<tr>
<td>photonic networks 972</td>
</tr>
<tr>
<td>physical/physiological biometric 62</td>
</tr>
<tr>
<td>picture-archiving and -communication system (PACS) 403, 828</td>
</tr>
<tr>
<td>Piecemeal Sesign 902</td>
</tr>
<tr>
<td>PKI 301, 1113</td>
</tr>
<tr>
<td>planning 510</td>
</tr>
<tr>
<td>PON 289</td>
</tr>
<tr>
<td>popularity 736</td>
</tr>
<tr>
<td>port 410</td>
</tr>
<tr>
<td>position-determination technologies 1102</td>
</tr>
<tr>
<td>power</td>
</tr>
<tr>
<td>distance 466</td>
</tr>
<tr>
<td>law 868</td>
</tr>
<tr>
<td>PQoS (Perceived Quality of Service) 777</td>
</tr>
<tr>
<td>principal</td>
</tr>
<tr>
<td>-component analysis 427</td>
</tr>
<tr>
<td>of least privilege access policy 902</td>
</tr>
<tr>
<td>privacy 479</td>
</tr>
<tr>
<td>impact assessments (PIA) 485</td>
</tr>
<tr>
<td>protection 75</td>
</tr>
<tr>
<td>seals 479, 485</td>
</tr>
<tr>
<td>private network 956</td>
</tr>
<tr>
<td>privilege 854</td>
</tr>
<tr>
<td>delegation 854</td>
</tr>
<tr>
<td>probability value 784</td>
</tr>
<tr>
<td>profile 628</td>
</tr>
<tr>
<td>programming language 518</td>
</tr>
<tr>
<td>progressive encoding 277</td>
</tr>
<tr>
<td>project learning or project works 95</td>
</tr>
<tr>
<td>proprietary software 798</td>
</tr>
<tr>
<td>prosody 963</td>
</tr>
<tr>
<td>protocol 172, 423, 659</td>
</tr>
<tr>
<td>data unit 659</td>
</tr>
<tr>
<td>proximate context 129</td>
</tr>
<tr>
<td>proxy 736, 1077</td>
</tr>
<tr>
<td>cache 736</td>
</tr>
<tr>
<td>pseudo random noise (PRN) 157</td>
</tr>
<tr>
<td>pseudocommunity 944</td>
</tr>
<tr>
<td>PST 741</td>
</tr>
<tr>
<td>PSTN 600, 972</td>
</tr>
<tr>
<td>public</td>
</tr>
<tr>
<td>domain 790</td>
</tr>
<tr>
<td>land mobile network (PLMN) 150</td>
</tr>
<tr>
<td>network 956</td>
</tr>
<tr>
<td>switched telephony network (PSTN) 554</td>
</tr>
<tr>
<td>WES 1102</td>
</tr>
<tr>
<td>publicly available 790</td>
</tr>
<tr>
<td>public-safety answer points (PSAP) 1102</td>
</tr>
<tr>
<td>PVC 600</td>
</tr>
<tr>
<td>Q</td>
</tr>
<tr>
<td>QAM 48</td>
</tr>
<tr>
<td>quadrature</td>
</tr>
<tr>
<td>amplitude modulation (QAM) 203</td>
</tr>
<tr>
<td>phase-shift keying (QPSK) 203</td>
</tr>
<tr>
<td>quality</td>
</tr>
<tr>
<td>degradation 777</td>
</tr>
<tr>
<td>of service (QoS) 30, 55, 150, 600, 703, 806, 874</td>
</tr>
<tr>
<td>quantization index modulation (QIM) watermarking 218</td>
</tr>
<tr>
<td>query by example 41, 122, 716</td>
</tr>
<tr>
<td>R</td>
</tr>
<tr>
<td>radio-frequency identification (RFID) 984</td>
</tr>
<tr>
<td>radius 908</td>
</tr>
<tr>
<td>rapid application development (RAD) 179</td>
</tr>
<tr>
<td>RDF 1077</td>
</tr>
<tr>
<td>reach 730</td>
</tr>
<tr>
<td>Real Time 703</td>
</tr>
<tr>
<td>record 761</td>
</tr>
<tr>
<td>reciprocal communication 730</td>
</tr>
<tr>
<td>redundant arrays of inexpensive disks (RAID) 828</td>
</tr>
<tr>
<td>reflective practice 136</td>
</tr>
<tr>
<td>Regional Bell Operating Company (RBOC) 328</td>
</tr>
<tr>
<td>regression 784</td>
</tr>
<tr>
<td>relationship risks 894</td>
</tr>
<tr>
<td>relevance feedback 41, 122</td>
</tr>
<tr>
<td>reliability 881</td>
</tr>
<tr>
<td>remote</td>
</tr>
<tr>
<td>collaboration 374</td>
</tr>
<tr>
<td>user 956</td>
</tr>
<tr>
<td>representative region 695</td>
</tr>
<tr>
<td>re-purposeable learning objects 886</td>
</tr>
<tr>
<td>resource</td>
</tr>
<tr>
<td>description framework (RDF) 493</td>
</tr>
<tr>
<td>reservation protocol (RSVP) 874</td>
</tr>
</tbody>
</table>
### Index of Key Terms

- retrieval stage 41
- reversible watermarking 218
- RFID 1026
- ripping 813
- risk analysis 902
- risks 894
  - analysis 956
- robust 212
  - watermarking 218
- router 423, 659
- routing
  - protocol 607
  - table by profile (RTP) 736
- RPC 614
- RRM (Radio Resource Management) 323

### S

- salient object 264
- satellite 352
  - constellation 352
- scanning (can be scheduled or batch) 569
- scavenging 956
- SCU 806
- search engine 101, 282, 868
- security
  - category 902
  - clearance 902
  - evaluation 956
  - event management (SEM) 395
  - laboratory 908
  - management 499
  - policy 395
- self
  - paced e-learning 741
  - - organizing group 1063
- semantic
  - gap 122
  - Web 256, 493
  - - based representation 695
- semi-fragile watermarking 218
- servant 813
- server 761
  - - based computing (or thin-client technology) 35
- service
  - access point 659
  - level agreement (SLA) 35, 874
- session layer 659
- set top box (STB) 436, 518, 686
- severe acute respiratory syndrome (SARS) 828
- shareable content object reference model (SCORM) 256, 493
- shareware 790
- short
  - messaging service (SMS) 992
  - - term memory 709
- shot 703
- signal 196
- silent commerce (s-commerce) 984
- similarity
  - matching 41
  - measure 122
- single channel per carrier (SCPC) 453
- site
  - map 1083
  - organization 109
  - specification 101
- situated learning 95
- SLA 600
- small firm 416, 474, 510
- smartphone 992
- SNR 48
- SOAP (Simple Object-Access Protocol) 88
- social
  - community 95
  - learning 1063
  - presence 232
  - realities 358
  - - construction 358
- Socratic dialogue 784
- software
  - agent(s) 21, 916
  - project 381
- SONET 55
- soundscape 347
- source code 798
- space constraints 741
- spam 485
- spatial-temporal activity level 777
- spatio-temporal relation 264
- splitter 48
- spoofing 68, 485, 813
- spread spectrum 972
  - (SS) watermarking 218
- stable filter 196
- stages of the virtual community life cycle 1046
- standard
  - positioning service (SPS) 157
- setting 790
standards 506
start-up latency 736
statement of applicability 403
static
  graphics 979
  Web pages 1083
stealth virus 569
steganography 389, 769
stego
  -object 389
stereotypes 677
stickiness 730
storage-area network (SAN) 828
stovepipe systems 924
stream 874
streaming 115
student participation in the online discussion 784
subscriber
  identity module (SIM) 621, 992
  line 544
summary-schemas model 695
supply context 129
support 703
survey 592
synchronicity 730
synchronization 446, 666
synchronous 1090
  communication 525
  distance delivery 225
system 868
  -initiated WES 1102
systems 157

T
T1 460
T-1 access 908
TA or timing advance 636
TACACS (Terminal Access-Controller Access-Control System) 908
tag 115
tagged value 677
TAM (Technology-Acceptance Model) 341
tamper 212, 769
TDMA 973
TDOA or Time Difference of Arrival 636
teaching strategy 820
technological risks 894
technology-mediated instruction 886
teleconferencing 225
telepresence 730
television 723
  commerce (t-commerce) 984
telework 950, 956
TELNET 868
Telnet 1037
TELRIC 544
temporal coordination mechanism 525
terminal defence 902
threats 403, 1000
time constraints 741
TOA or time of arrival 637
tokens 446, 666
topological relation 264
TPB (Theory of Planned Behaviour) 341
TRA (Theory of Reasoned Action) 341
trail 446
training 936
transactional software 246
transcoding 1007, 1077
translation 950
  -mediated communication (TMC) 950
transport layer 659
trap doors 956
treatment proxy 736
trojan horse 410, 956
troposphere 157
tunneling 956
TV object 518
twisted pairs 48
TWQ (teamwork quality) 537
typeface 979
typography 979

U
ubiquitous
  commerce (u-commerce) 984
  computing 607, 709, 1020, 1026
UBS (Universal Serial Bus) Port 806
UDDI (Universal Description, Discovery, and Integration) 88
UDF 381
UM (Unified Messaging) 88
UMA 1007
UMTS (Universal Mobile Telecommunication System) 294, 637, 973
unicast 30
  stream 736
### Index of Key Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>URI (Uniform Resource Identification)</td>
<td>924</td>
</tr>
<tr>
<td>URL (Universal Resource Locator)</td>
<td>1077, 1082, 1095</td>
</tr>
<tr>
<td>usability</td>
<td>246, 537, 1012, 1082</td>
</tr>
<tr>
<td>USENET</td>
<td>1037</td>
</tr>
<tr>
<td>user</td>
<td>709, 761</td>
</tr>
<tr>
<td>interaction</td>
<td>446, 666</td>
</tr>
<tr>
<td>interface</td>
<td>246, 347</td>
</tr>
<tr>
<td>-centered design</td>
<td>1013</td>
</tr>
<tr>
<td>-initiated WES</td>
<td>1102</td>
</tr>
<tr>
<td>UTAUT (Unified Theory of Acceptance and Use of Technology)</td>
<td>341</td>
</tr>
<tr>
<td>UTF-8</td>
<td>101</td>
</tr>
<tr>
<td>UUCP</td>
<td>1037</td>
</tr>
<tr>
<td>V</td>
<td></td>
</tr>
<tr>
<td>VA</td>
<td>916</td>
</tr>
<tr>
<td>value chain</td>
<td>436</td>
</tr>
<tr>
<td>-added services</td>
<td>686</td>
</tr>
<tr>
<td>values</td>
<td>241</td>
</tr>
<tr>
<td>vector graphic</td>
<td>979</td>
</tr>
<tr>
<td>verification</td>
<td>75</td>
</tr>
<tr>
<td>very-high-speed DSL (VDSL)</td>
<td>54</td>
</tr>
<tr>
<td>virtual</td>
<td></td>
</tr>
<tr>
<td>class, virtual lecture, virtual seminar, virtual tutorial</td>
<td>1068</td>
</tr>
<tr>
<td>community</td>
<td>1046, 1063</td>
</tr>
<tr>
<td>knowledge space (Web site)</td>
<td>1054</td>
</tr>
<tr>
<td>learning</td>
<td></td>
</tr>
<tr>
<td>community</td>
<td>1063</td>
</tr>
<tr>
<td>environments (VLE)</td>
<td>256</td>
</tr>
<tr>
<td>private networks (VPNs)</td>
<td>956</td>
</tr>
<tr>
<td>reality</td>
<td>374, 950</td>
</tr>
<tr>
<td>school, virtual college, virtual university</td>
<td>1069</td>
</tr>
<tr>
<td>team</td>
<td>241, 950</td>
</tr>
<tr>
<td>universities</td>
<td>225</td>
</tr>
<tr>
<td>/online community</td>
<td>841</td>
</tr>
<tr>
<td>virtuality</td>
<td>358</td>
</tr>
<tr>
<td>virus</td>
<td></td>
</tr>
<tr>
<td>definition file (subscription service)</td>
<td>570</td>
</tr>
<tr>
<td>signature</td>
<td>570</td>
</tr>
<tr>
<td>viruses</td>
<td>956</td>
</tr>
<tr>
<td>visibility</td>
<td>101</td>
</tr>
<tr>
<td>VLE (Virtual Learning environments)</td>
<td>537</td>
</tr>
<tr>
<td>voice</td>
<td></td>
</tr>
<tr>
<td>commerce (v-commerce)</td>
<td>984</td>
</tr>
<tr>
<td>over IP (VoIP)</td>
<td>328</td>
</tr>
<tr>
<td>recognition</td>
<td>506</td>
</tr>
<tr>
<td>VRML</td>
<td>179, 862</td>
</tr>
<tr>
<td>vulnerabilities</td>
<td>403</td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W3C (World Wide Web Consortium)</td>
<td>924</td>
</tr>
<tr>
<td>WAAS</td>
<td>157</td>
</tr>
<tr>
<td>WAN</td>
<td>600</td>
</tr>
<tr>
<td>WAP (Wireless Application Protocol)</td>
<td>301, 644, 973, 1020, 1026</td>
</tr>
<tr>
<td>WAP Gap</td>
<td>621</td>
</tr>
<tr>
<td>watermark attack</td>
<td>212</td>
</tr>
<tr>
<td>WBT</td>
<td>741</td>
</tr>
<tr>
<td>WCDMA</td>
<td>973</td>
</tr>
<tr>
<td>WCDMA-FDD (Wideband Code-Division Multiple Access, Frequency-Division Duplex)</td>
<td>323</td>
</tr>
<tr>
<td>WDM</td>
<td>973</td>
</tr>
<tr>
<td>wearable computing devices</td>
<td>709</td>
</tr>
<tr>
<td>Web (World Wide Web, WWW)</td>
<td>1054</td>
</tr>
<tr>
<td>cache</td>
<td>55</td>
</tr>
<tr>
<td>conferencing</td>
<td>225</td>
</tr>
<tr>
<td>impact factor</td>
<td>1095</td>
</tr>
<tr>
<td>marketing</td>
<td>109</td>
</tr>
<tr>
<td>page</td>
<td>1054</td>
</tr>
<tr>
<td>search engine</td>
<td>207</td>
</tr>
<tr>
<td>student</td>
<td>784</td>
</tr>
<tr>
<td>-based</td>
<td></td>
</tr>
<tr>
<td>systems</td>
<td>179</td>
</tr>
<tr>
<td>teaching</td>
<td>979</td>
</tr>
<tr>
<td>webometrics (or internetometrics or cybermetrics)</td>
<td>1095</td>
</tr>
<tr>
<td>WEP</td>
<td>1113</td>
</tr>
<tr>
<td>wide area</td>
<td></td>
</tr>
<tr>
<td>networks (WANs)</td>
<td>956</td>
</tr>
<tr>
<td>radio network</td>
<td>651</td>
</tr>
<tr>
<td>Wifi</td>
<td>628</td>
</tr>
<tr>
<td>wired equivalent privacy (WEP)</td>
<td>621</td>
</tr>
<tr>
<td>wireless</td>
<td>659</td>
</tr>
<tr>
<td>commerce (mobile or m-commerce)</td>
<td>984</td>
</tr>
<tr>
<td>emergency service (WES)</td>
<td>129, 1103</td>
</tr>
<tr>
<td>local community (WLC)</td>
<td>129</td>
</tr>
<tr>
<td>transport security layer (WTSL)</td>
<td>644</td>
</tr>
<tr>
<td>WLAN (Wireless Local-Area Network)</td>
<td>367</td>
</tr>
<tr>
<td>WML</td>
<td>1020, 1026</td>
</tr>
<tr>
<td>WMLScript</td>
<td>1020</td>
</tr>
<tr>
<td>work for hire</td>
<td>790</td>
</tr>
<tr>
<td>workstation</td>
<td>761</td>
</tr>
<tr>
<td>World Wide Web (WWW)</td>
<td>423</td>
</tr>
<tr>
<td>worm</td>
<td>410</td>
</tr>
<tr>
<td>WPA</td>
<td>1113</td>
</tr>
</tbody>
</table>
Index of Key Terms

WSDL (Web-Services Description Language)  88
WYSIWYG Visual Design Tools  179

X

X3D 703, 862
X-Media 578
XML (Extensible Markup Language) 115, 924, 1077
Xpointer 1077
XSL 1077
XSL style sheet 1032

Z

zoom 115
ZPD  95