Index

A

accounting information system (AIS) 569
ACID (see atomicity, consistency, isolation, and durability) 308
active browsing 13, 21
adoption 347, 622
Advanced Labs for Bioinformatics Agencies (ALBA) 69
after-tax margin 599
agile
development 702
software development 141, 152
Agreement on Trade-Related Aspects of International Property (TRIPS) 338
AHP (see analytical hierarchy process)
AIS (see accounting information system)
ALBA (see Advanced Labs for Bioinformatics Agencies)
analytical hierarchy process (AHP) 695
anarchism 362
anarchy 354
Apache 146, 217
HTTP server 152
Software Foundation (ASF) 145, 217
application
-development ideology 479
-selection ideology 479
-use ideology 479
service provider (ASP) 344
architectural
-constraints 273
architecture
governance 481
ASF (see Apache Software Foundation)
ASP (see application service provider)
asset 493
turnover ratio 602
assimilation 311, 325
atomicity, consistency, isolation, and durability (ACID) 308
auditing 569
author
-function 12, 13, 22
/owner 396
availability 262, 264, 418
B

back door 267
Berkeley
Software Distribution (BSD) 632
License 188
beta
release 637
version 267
bioinformatics 69, 78
Book Burro 13, 22
BPM (see business performance management)
BSA (see Business Software Alliance)
BSD (see Berkeley Software Distribution)
business
-intelligence analytics 531
model 504, 531, 554, 589, 605
performance management (BPM) 308
strategy 605
Business Software Alliance (BSA) 162, 166

C

CAL (see client access license)
capability maturity model (CMM) 209, 481, 693
capstone project 679
cascading style sheets (CSS) 694
CASE (see computer-aided software engineering)
case study 80, 91, 280
CCIDNET 114
CC licenses 385
CDS (see closed data standards)
central processing unit (CPU) 245
CGI program 630
change process management 622
client
-server infrastructure 242
access license (CAL) 246, 252
closed
data standards (CDS) 310
proprietary software 626
source software (CSS) 195, 309, 351
CMC (see computer-mediated communication)
CMM (see capability maturity model)
CMS (see content management system)
co-production 531
code 362
-quality 270
coding standard 702
collaborative
-software design 127
-technologies 111, 114
-collective invention 228, 238
commercial
-off-the-shelf (COTS) 134
-common warehouse model (CWM) 488
communitarianism 6, 11
community 169–183, 182–183, 199, 209, 347
-based innovation 230
customer 514, 520
-of practice (CoP) 231, 611, 623
-participation 508
-support 203
-competitive strategy 589
-component (see also module)
-computational costs 240
-computer
-aided software engineering (CASE) 679, 690
-mediated communication (CMC) 639
-science (CS) 672
-computing practices 102
-concurrent versioning system (CVS) 263, 267
-connection manager 252
-constructivist 689
-content management system (CMS) 255–268
-context 280
-factors 274
-contract 240, 252
-convergent technologies 114
-cooperative
-information systems 70, 78
-services 70
-CoP (see community of practice)
copyright 338, 349, 367–372, 441
/patent 396
-protection 328
-core
-competency 589
-developers 171
-cost
-avoidance 295
-savings 105
-sharing 295
-COTS
-(see commercial off-the-shelf)
-integration 140
-CPU (see central processing unit)
-Creative Commons (CC) 382–393
-licenses 392
critical success factor (CSF) 155, 166
-CRM (see customer relationship management)
-cross-functional integration 569
-CSF (see critical success factor)
-CSS (see closed source software)
-CUI (see customer and user involvement)
current ratio 599
customer
-and user involvement (CUI) 522, 531
-relationship management (CRM) 531, 559
customers’ lock-in 423
cVS (see concurrent versioning system)
-CWM (see common warehouse model)
cybercollaboratories 127
cybercrime 475
cyberterrorism 475

D

data
-analysis 283, 293
-mining 283, 293
-standard 309, 325
database 308
-management system (DBMS) 295, 569
-DBM (see database management system)
-DBMS (see database management system)
denial of service (DoS) 475
dependency 458
deployment 310, 325
derivative work 397
derived works 188
design
-for appropriation 467
-phase 157
desktop 85, 91
-OSS 154–167, 167
destructive application ideologies 479
developing countries 94, 101, 103
development
  practices 284, 293
  software life cycle (DSLC) 679
digital
economy 445
  right management 441
Digital Commons 47-67, 60
Directory of Open Access Journals (DOAJ) 699
dissipation 238
distribution license 215
DOAJ (see Directory of Open Access Journals)
documentation 204, 209, 264
  project 222
domain model 702
DoS (see denial of service)
drug discovery 69, 78
DSLC (see development software life cycle)

E
e-
  administration law 431
  experiment 69, 78
  learning 638, 647
  science 69, 78
EAI (see enterprise application integration)
earning platform (LP) 639
earnings 605
  per share (EPS) 536, 598, 605
Eclipse Public License (EPL) 188
economic regulation 424
editing macros (EMACS) 40, 45
educational knowledge portal (EKP) 638
efficiency in the public sector 418
EKP (see educational knowledge portal)
electronic dissemination 657
EMACS (see editing macros)
empirical evaluation 280
engine 267
enhanced competition 418
enterprise
  -scale business systems 559
  application integration (EAI) 488
  system 560
EPC (see European Patent Convention)
epistemic community 231
EPO (see European Patent Office)
EPS (see earnings per share)
equivocality 128, 140
essential facility 424
ETL (see extraction transformation and load)
European Patent
  Convention (EPC) 338
Office 338
evaluation 540, 647
  criteria 647
  framework 284
  process 274
  team creation 275
extrensible business report language (XBRL) 569
external
  network 120
  observer 117, 125
extraction transform and load (ETL) 483
extreme programming (XP) 142
extrinsic motivations 230, 238

F
F/OS
  (see free/open source)
FAQ (see frequently asked question)
FDD (see feature-driven development)
feature-driven development (FDD) 142
final
  evaluation 276
  release 142, 149, 152
Firebird 298
firm 508
flexibility 105, 342, 418
FLOSS (see free/libre open source software)
  research 282-293
fork (software development) 45
forking 267
formal specification 702
forum 211, 226
frame analysis 467
framework 117, 125
free
  /libre open source software (FLOSS) 30, 33, 45, 51,
    60, 94, 101, 230, 240, 282, 394, 460, 590
  /open source (F/OS) 412
access 373-381
  to law movement 373
and open source software (FOSS) 91, 681, 689
cash flow 605
distribution 270
educational book 222
redistribution 187
rider 521
software (FS) 1-11, 24, 33, 60, 94, 101, 186, 195,
  293, 363-372, 372, 452, 577, 647
  movement 48, 60
Free Software
Foundation (FSF) 40, 94, 186, 363, 372, 383, 394,
  409, 542
/GNU project 222
French e-administration 441
Index

frequently asked questions (FAQs) 489
FS (see free software)
FSF (see Free Software Foundation)
functionality 205, 647
functional requirements 272

G

gateway 241, 252
generally recognized as mature (GRAM) 561
generally recognized as safe (GRAS) 561
General Public License (GPL) 11, 40, 45, 187, 195, 33, 348, 362, 363, 372, 577
government information system (GIS) 446
gift economies 497
GIS (see geographic information system)
GLW (see GNU/Linux-Windows)
GNU 114, 267, 362, 372
GNU/Linux-Windows (GLW) 240, 252
General Public License (GNU GPL) 308, 542
GPL (see GNU General Public License)
Lesser General Public License (LGPL) 188
goal-question-metric (GQM) 272, 280
governance 493
GPL (see General Public License)
GQM (see goal-question-metric)
GRAM (see generally recognized as mature)
graphical user interface (GUI) 308
design 121
GRAS (see generally recognized as safe)
Greasemonkey 13, 22
grid computing 69, 78, 308
gross
domestic product (GDP) 114
margin 599
GUI (see graphical user interface)

H

hacker 35, 45
community 4, 11
culture 35, 46
Hacktivism 479
Hacktivismo 475
HCI (see human computer interface)
high-fidelity prototypes 126
human-computer interface (HCI) 185
hybrid
business model 513
infrastructure 244, 247
Hypercard 689
hypertext markup language (HTML) 694

I

ICT (see information and communication technology)
IDE (see integrated development environment)
IDE (see integrated development environments)
Ikea economics 523
immaterial labour 50, 60
impact analysis 485
implementation phase 157
information and communication technology (ICT) 79, 114, 660
diffusion 418
system 240
technology (IT) 625, 671
governance 481
technology infrastructure library (ITIL) 491
infrastructure 252, 625, 637
initial public offering (IPO) 533
requirements analysis 275
integrated development environment (IDE) 119
development environments (IDE) 697
integration 206
intellectual property (IP) 214, 226, 331, 396, 541
terms 396
intellectual property right (IPR) 240, 332, 349, 424, 537
interactive relay chat (IRC) 120
interdependence 118
internal control 569
network 121
rate of return (IRR) 563
International Data Corporation (IDC) 114
Internet service provider (ISP) 82
interoperability 70, 78, 259, 264, 321, 418, 441, 458, 637
interoperable software 679
intrinsic motivations 230, 238
inventory management 485
turnover ratio 599
investments 118
IP (see intellectual property)
IPO (see initial public offering)
IPR (see intellectual property right)
IPRs (see intellectual property rights)
IRC (see interactive relay chat)
IRR (see internal rate of return)
ISP (see Internet service provider)
issue tracking 214, 226
IT business value 531
iteration planning 275
iterative
development 142, 147
prototype development 275
software development 280
ITIL (see information technology library)

J
JavaScript 19, 22
journal management software 657
jurisdiction 380

L
L-PEST model 451
labor politics/economics 467
LAMS (see learning activity management system)
LAN (see local area network)
law 374, 380
LDC (see less developed countries)
learning
activity management system (LAMS) 629
management systems (LMS) 638
platform (LP) 639
support system (LSS) 639
legal
environment 452
information institutes (LIIs) 375
services community 340
Legal Services Corporation (LSC) 341, 347
less developed countries (LDC) 79, 92
liberalism 11
license 202, 209, 380, 393
/contract 397
agreement 240
compatibility 393
management 637
manager 252
Linupy 107, 114
Linux 372, 623, 668
distribution 623
liquidity ratios 605
local
area network (LAN) 594
e-administration 441
localization 458
lock-in 321, 325
longevity 201–210
low-fidelity
prototypes 128
prototyping 128
LSC (see Legal Services Corporation)
LSS (see learning support system)

M
mailing list 211, 226
maintenance cost 106
managed learning environment (MLE) 639
maturity model 209, 493
meta-model 493
metadata 493
Microsoft Academic Alliance (MSDN AA) 669
migration 155, 309, 326
mission sensitive nonprofit open source Applications 479
MIT License 188
MLE (see managed learning environment)
modularity 206
module (see also component)
Mono 669
morality 27, 33
Mozilla 147, 152, 449
Public License (MPL) 188
mutuality 118
MySQL 298, 548

N
Napster 20, 22
national security 105
net present value (NPV) 563
Netscape Public License (NPL) 188
network
effect 323, 325
studies 125
NGOs (see nongovernmental organizations)
non-functional requirements 273
nonexcludability 228
nongovernmental organizations (NGOs) 447, 602
nonprofit 347
organization 505
nonrivalry 228
NOS (see network operating system)
NPV (see net present value)

O
OAI (see Open-Access Initiative)
OASIS (see Organization for the Advancement of Structured Information Standards)
object-relational database management system (ORDBMS) 299, 308
Object Management Group (OMG) 488, 671
ObjectWeb 220
OCM (see original component manufacturing)
ODS (see open data standards)
off-the-shelf
option (OTSO) 271
products 625
Index

offering 554
office automation 310, 326
OJS (see Open Journal System)
OLAP (see online analytical processing)
OMG (see Object Management Group)
online analytical processing (OLAP) 296, 308
Open
-Access Initiative (OAI) 649, 657
Journal System (OJS) 654
Source
Definition (OSD) 187, 255, 384, 542
Eclipse plug-in 117
Initiative (OSI) 187, 383, 394, 409, 542, 632, 639, 671, 680
Template (OST) 340, 347
open
access publishing 389, 393
content 393
data standards (ODS) 309
source 362, 533, 680
community 125, 521
customer relationship management 521
development 142
environment 486
journal management software 649
learning 689
maturity model (OSMM) 198–210, 482, 561, 628
meta-model 489
movement 511
project 117, 125, 521
repository 484
evaluation 197–210
evaluation literature 197–210
licenses 382–393, 393
market 197
support licenses 410
Web portals 211–226
source’s social value equation 479
source software (OSS)
development (OSSD) 690
standard 680
technology 228
operating
margin 599
system (OS) 368–372, 669
operational maintenance process 517
ORDBMS (see object-relational database management system)
Organization for the Advancement of Structured Information Standards (OASIS) 310
original component manufacturing (OCM) 548
OS (see operating system)
OSD (see Open Source Definition)
OSI (see Open Source Initiative)
OSMM (see open source maturity model)
OSS (see open source software)
candidate selection 275
OST (see Open Source Template)
OTSO (see off-the-shelf option)
outsourc 680
P
paid support 203
pair programming 702
paper prototyping 128, 140
patchwork prototyping 126, 126–140, 140
patent 338
law protection 329
payback period (PB) 563
PB (see payback period)
PC (see personal computer)
PDA (see personal data assistance)
PDA (see personal data assistant)
pedagogy 637
peer
production 48, 60
review 172, 182
peer-to-peer
infrastructure 242
network 522
production 531
PERL (see practical extraction and reporting language)
per server license 246
personal
computer (PC) 155, 257
data
assistance (PDA) 491
assistant (PDA) 396
piracy 104
/copyright infringement 458
PiTR (see point-in-time recovery)
planning phase 157
point-in-time recovery (PiTR) 302
PORE (see procurement-oriented requirements engineering)
PostgreSQL 299
power relations 118
PPP (see public-private partnership)
practical extraction and reporting language (PERL) 630
pragmatism 25, 33
primary materials 374, 376, 381
problem exploration 142, 152

725
procurement-oriented requirements engineering (PORE) 271
production community 170–183, 182–183
productivity
paradigm change 680
software 92
professional development 637
profitability ratios 605
properties 117, 125
property rights 228
proprietary 540
software (PS) 26, 33, 94, 101, 154, 185, 196, 240,
283, 424, 577, 626, 659
prototype 274
prototyping 269–281, 281
PS (see proprietary software)
public
-private partnership (PPP) 429, 436, 441
access 381
good 637
legal information 374, 381
license 260
Public Knowledge Project 654
Python scripting language 121

Q
QA (see quality assurance)
QFD (see quality function deployment)
QIP (see quality improvement paradigm)
quality 702
-assurance (QA) 199
-function deployment (QFD) 695
-improvement paradigm (QIP) 272, 281
quantitative methods 293
quasi open source licenses 410
quick ratio 600

R
rapid
-application development (RAD) 128
-prototyping 126, 128, 140
RAS (see reusable asset specification)
RDBMS (see relational database management system)
RDBS (see relational database server)
registered users 215
relational
database
-management system (RDBMS) 295, 308
-server (RDBS) 548
data model 569
relationships 554
release activity 200
rent-seeking 511
repository 493
request for proposal (RFP) 564, 569
research and development (R&D) 454
residual income (RI) 565
resource mobilization 467
resources 554
restrictive license 261
retention ratio 601
return on
-assets (ROA) 601
-average common equity (ROE) 601
-investment (ROI) 155, 458, 486, 563
-investment capital (ROC) 601
reusable asset specification (RAS) 488
reuse 493
revenue model 546, 554
RFP (see request for proposal)
RI (see residual income)
righ ts 240, 252
ROA (see return on assets)
ROC (see return on investment capital)
ROE (see return on average common equity)
ROI (see return on investment)

S
Samba 241, 252
scholarly journals 657
schools 637
SCORM (see sharable courseware object reference model)
SDK (see software development kit)
secondary 374
materials 381
security (see also stability)
seed company 540
serial pricing crisis 657
service-oriented
-architecture (SOA) 485
-computing (SOC) 69
sharable courseware object reference model (SCORM)
629
shared software infrastructure program (SSIP) 670, 680
small
-scale business systems 558
to medium enterprise (SME) 602
SMP (see symmetric multiprocessor)
SOA (see service-oriented architecture)
SOC (see service-oriented computing)
social
-technical approach to COTS evaluation (STACE) 271
mechanism 168, 182
movements 467
order 168, 182
participation 502, 508
<table>
<thead>
<tr>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>software 52, 60</td>
</tr>
<tr>
<td>technologies 48, 60</td>
</tr>
<tr>
<td>socially constructed 637</td>
</tr>
<tr>
<td>informed algorithm 35, 46</td>
</tr>
<tr>
<td>sociotechnical system 127, 140</td>
</tr>
<tr>
<td>software development</td>
</tr>
<tr>
<td>kit (SDK) 120</td>
</tr>
<tr>
<td>support 215</td>
</tr>
<tr>
<td>engineering (SE) 282, 293, 671, 672, 702</td>
</tr>
<tr>
<td>license 260, 264, 372</td>
</tr>
<tr>
<td>licensing 554</td>
</tr>
<tr>
<td>longevity 209</td>
</tr>
<tr>
<td>maturity models 481</td>
</tr>
<tr>
<td>migration 92</td>
</tr>
<tr>
<td>patent 368–372</td>
</tr>
<tr>
<td>pattern 702</td>
</tr>
<tr>
<td>project 222</td>
</tr>
<tr>
<td>protection 328–339</td>
</tr>
<tr>
<td>release activity 210</td>
</tr>
<tr>
<td>requirements 206</td>
</tr>
<tr>
<td>security 210</td>
</tr>
<tr>
<td>tool 680</td>
</tr>
<tr>
<td>softwarization 525</td>
</tr>
<tr>
<td>source</td>
</tr>
<tr>
<td>code 93, 101, 184, 187, 196, 424, 554</td>
</tr>
<tr>
<td>publication 215</td>
</tr>
<tr>
<td>SQL (see structured query language)</td>
</tr>
<tr>
<td>Server 297</td>
</tr>
<tr>
<td>SSIP (see shared software infrastructure program)</td>
</tr>
<tr>
<td>stability (see also security) 106, 186, 262, 264</td>
</tr>
<tr>
<td>STACE (see social-technical approach to COTS evaluation)</td>
</tr>
<tr>
<td>standards 206</td>
</tr>
<tr>
<td>startup company 540</td>
</tr>
<tr>
<td>strategic planning 569</td>
</tr>
<tr>
<td>structural demands/conditions 467</td>
</tr>
<tr>
<td>structured query language (SQL) 308, 548</td>
</tr>
<tr>
<td>subsidized open-access journals 658</td>
</tr>
<tr>
<td>supercommunity 122</td>
</tr>
<tr>
<td>support 202</td>
</tr>
<tr>
<td>sustainability 233, 238</td>
</tr>
<tr>
<td>sustainable growth rate 601</td>
</tr>
<tr>
<td>symbiotic 467</td>
</tr>
<tr>
<td>symbolic Capital 467</td>
</tr>
<tr>
<td>symmetric multiprocessor (SMP) 303</td>
</tr>
<tr>
<td>system 117, 125</td>
</tr>
<tr>
<td>participation 502, 509</td>
</tr>
<tr>
<td>technological knowledge 228</td>
</tr>
<tr>
<td>technology adoption 311</td>
</tr>
<tr>
<td>Technology Initiative Grant (TIG) Program 347</td>
</tr>
<tr>
<td>TEIs (see tertiary educational institutions)</td>
</tr>
<tr>
<td>territorial e-administration 441</td>
</tr>
<tr>
<td>tertiary educational institutions (TEIs) 660</td>
</tr>
<tr>
<td>theory of</td>
</tr>
<tr>
<td>customer and user involvement (CUI) 524</td>
</tr>
<tr>
<td>planned behavior (TPB) 611, 613</td>
</tr>
<tr>
<td>Tigris 219</td>
</tr>
<tr>
<td>TiVo 368–372</td>
</tr>
<tr>
<td>-ization 368–372</td>
</tr>
<tr>
<td>total cost of ownership (TCO) 98, 101, 155, 167, 416, 424, 454, 459, 563, 592, 661</td>
</tr>
<tr>
<td>TPB (see theory of planned behavior)</td>
</tr>
<tr>
<td>trademark 397</td>
</tr>
<tr>
<td>trade sale 533</td>
</tr>
<tr>
<td>traditional open source licenses 410</td>
</tr>
<tr>
<td>tragedy of</td>
</tr>
<tr>
<td>the anticommons 349, 362</td>
</tr>
<tr>
<td>the commons 354, 362</td>
</tr>
<tr>
<td>transaction costs 240–254</td>
</tr>
<tr>
<td>transmission-control protocol/Internet protocol (TCP/IP) 241</td>
</tr>
<tr>
<td>transparency 459</td>
</tr>
<tr>
<td>TRIPS (see Agreement on Trade-Related Aspects of International Property)</td>
</tr>
<tr>
<td>turnover 605</td>
</tr>
<tr>
<td>tuXlab 669</td>
</tr>
<tr>
<td>U</td>
</tr>
<tr>
<td>Ubuntu 605</td>
</tr>
<tr>
<td>UML (see unified modeling language)</td>
</tr>
<tr>
<td>uncertainty 128, 140</td>
</tr>
<tr>
<td>unified modeling language (UML) 241, 671, 693</td>
</tr>
<tr>
<td>United States Patent and Trademark Office (USPTO) 338</td>
</tr>
<tr>
<td>usability 186</td>
</tr>
<tr>
<td>user</td>
</tr>
<tr>
<td>awareness 161</td>
</tr>
<tr>
<td>community 211, 231, 238, 261, 264</td>
</tr>
<tr>
<td>scripts 13, 22</td>
</tr>
<tr>
<td>training 161</td>
</tr>
<tr>
<td>users/consumers 467</td>
</tr>
<tr>
<td>USPTO (see United States Patent and Trademark Office)</td>
</tr>
<tr>
<td>V</td>
</tr>
<tr>
<td>valuation 540</td>
</tr>
<tr>
<td>theory 534</td>
</tr>
<tr>
<td>value</td>
</tr>
<tr>
<td>-added resellers (VAR) 563</td>
</tr>
<tr>
<td>chain 589</td>
</tr>
</tbody>
</table>
Index

network 589
proposition 589
values 637
VAR (see value-added resellers)
VC (see venture capital)
vehicle relationship management (VRM) 526
vendor
  customer 514
  lock-in 459
venture
  capital (VC) 535, 540
  capitalist 534
versatility 262, 264
version control 142, 148, 152
  system 226
virtual
  laboratories 71
  learning environment (VLE) 639
VLE (see virtual learning environment)
volume license product key (VPK) 351
VPK (see volume licenses product key)
VRM (see vehicle relationship management)

W

WAN (see wide area network)
Web
  portal 226
  service definition language (WSDL) 488
  services 69, 78
wide area networks (WANs) 594
Wiki 689
Wiki 689
Wikimedia Foundation 689
Wikipedia 689
World Trade Organization (WTO) 339, 451
WSDL (see Web service definition language)
WTO (see World Trade Organization)

X

XBRL (see extensible business reporting language)
XP (see extreme programming) 1

Z

zone of proximal development (ZPD) 686, 689
zope 347
ZPD (see zone of proximal development)