# Index

A  
Academy for Education Development (AED) 255  
access points (APs) 170  
ActiGraph Activity Monitor 103  
Activities of Daily Living (ADL) 132, 149, 157  
adaptive threshold (ATDD) 121  
additive white Gaussian noise (AWGN) 315-316  
Ad hoc Sensor NETwork (ASNET) 15  
admission control (AC) 125  
agent based models (ABM) 230  
Ambient Assisted Living (AAL) 148  
Application Programming Interface (API) 189  
Application Specific Integrated Circuit (ASIC) 216  
artificial neural networks (ANN) 232  
Attitude and Heading Reference Systems (AHRS) 66  
AuditHIS 148, 152-159, 165  
Augmented Reality (AR) 66  
Automatic Speech Recognizer (ASR) 151  
Azure Cloud 191, 193, 195-196, 199, 205, 209  
Azure SQL Database 195-196, 210-211  

B  
Backtracking Particle Filter (BPF) 66  
Bangladesh Society for Telemedicine and eHealth (BSTeH) 255  
Bangladesh Telemedicine Association (BTA) 255  
Bangladesh Telemedicine Services (BTS) 255  
Bedside Communications Controller (BCC) 20  
bilog 215  
bioglycam 102, 106-112  
bis(ethylenedithio)tetrathiafulvalene (ET) 215  
bit error rate (BER) 5, 315, 318  
Bluetooth low energy (BTLE) 313  
body area networks (BAN) 86  
body sensor network (BSN) 40, 89  
Broadband Global Area Network (BGAN) 170  

C  
calorimetry 103  
Canadian Triage and Acuity Scale (CTAS) 239  
carrier sense (CS) 314  
CD-ROM 341-344, 346-347, 349  
Centre National d'Etudes Spatiales (CNES) 329  
Cerebral Palsy (CP) 302  
Class Diagram 43-44, 197  
clear channel assessment (CCA) 314  
closed subscriber group (CSG) 171, 176  
Cloud Computing 187, 189-190, 210, 212  
Cluster Computing 59-61  
Collecte Localisation Satellites (CLS) 330  
Collision Resolution Queue (CRQ) 4, 118  
common-mode rejection ratio (CMRR) 107  
concurrence histograms (CHs) 292  
consumerisation 351-352  
contention access period (CAP) 4, 117  
Contention Access Period (CAP) 4, 117  
contention-based allocations (CAP) 122  
control adaptive transmission (CRA) 22  
Cronbach’s alpha 345  

D  
Data Transmission Queue (DTQ) 4, 118  
Deputy Director of Health Services (DDHS) 280  
Device Communication Controller (DCC) 20  
digital analog converter (DAC) 221  
digital subscriber line (DSL) 171  
Directorate of Public Health and Preventive Medicine (DPH&PM) 272  
direct sequence spread spectrum (DSSS) 316  
discrete event simulation (DES) 231  
Distant Speech Recogniser (DSR) 163  
Distributed Queuing Body Area Network (DQBAN) 4, 117  
Domain Information Model (DIM) 20  
downlink (DL) 122
Index

E
Earliest Deadline First (EDF) 127
Earliest Deadline First (EDF) 127
e-Health Care Unit (e-HCU) 260
electric double-layer capacitor (EDLC) 336
electrocardiography (ECG) 7, 15, 313
electro dermal activity (EDA) 108
electromyography 7-8, 11, 106-108, 116
Electronic Health Records (EHR) 188
Electronic Patient Record (EPR) 169
Emergency and Telemedicine Support System
   (EHSS) 187
emergency department (ED) 231
Emergency Medical Service (EMS) 169
Emergency User Equipment (EUE) 172
ErController 235-240, 246
extensible markup language (XML) 55

F
False Alarm Rate (FAR) 156
Field Programmable Gate Array (FPGA) 333
Flowcytometry 292
Force Sensing Resistors (FSR) 132
frequency modulation – ultra wide band (FM-UWB) 314

G
Gaussian mixture model (GMM) 153
general packet radio service (GPRS) 36, 273
generic personalised health care scheme 56-57
genetic programming (GP) 231
Geographical Information System (GIS) 336
global error rate (GER) 141, 156
Global Error Rate (GER) 141, 156
Gross Motor Function Classification System (GM-
   FCS) 302
guaranteed time slots (GTSs) 119
guided user interface (GUI) 39

H
Hammersmith Infant Neurological Examination
   (HINE) 301-302
Health Level Seven International (HL7) 55
Hidden Markov Model (HMM) 153
Home Node B Gateway (HNB-GW) 172
Home Node B (HNB) 172, 185
Home User Equipment (HUE) 172
hue, saturation and intensity (HSI) 295, 298
human computer interaction philosophy (HCI) 52
Hybrid Unified-slot Access (HUA) 4
Hypertext Transfer Protocol (HTTP) 189

I
impulse radio - ultra wide band (IR-UWB) 314
independent component analysis (ICA) 163
industrial scientific and medical (ISM) 313
Inertial and Magnetic Measurement System (IMMS) 66
inertial measurement unit (IMU) 65, 67
Influenza-Like-Illness (ILI) 235
information element (IE) 122
Instant Power Supply (IPS) 267
Institute of Electrical and Electronic Engineers
   (IEEE) 2, 18
Institute of Post Graduate Medical Education &
   Research (IPGME & R) 308
Integrated Disease Surveillance Program (IDSP)
   280
Intelligent Sensor Node (ISN) 66
intensive care units (ICU) 323
Interacting Multiple Mode (IMM) 66
interface design 341-349
intra ocular pressure (IOP) 215
Intra-Ventricular Hemorrhage (IVH) 302

J
Java 2 Micro Edition (J2ME) 90
Java Archive (JAR) 273

K
K-Nearest Neighbor (KNN) 293

L
Lab-on-a-Chip (LOC) 13
Laser Base Station (LBS) 66
Learning Process Index (LPI) 345
Least Mean Square (LMS) 154
low-delay traffic-adaptive medium access control
   (LDTA-MAC) 119
Lower Threshold (LLT) 93
Lower Upper thresh- old (LUT) 93

M
machine learning (ML) 230
Macrocellular Node B (MNB) 172
Index

Macrocellular User Equipment (MUE) 172
Markov Decision Process (MDP) 232
Markov State Heuristic (MASH) 232, 241
Mass Spectrometry 292
mean arterial pressure (MAP) 8
mean time to failure (MTTF) 320
Medical Device Application Profile (MDAP) 20
Medical Device Data Language (MDLL) 20
medical device encoding rules (MDER) 20
medical device system (MDS) 20
medium access control (MAC) 2, 4, 21, 30, 115, 117, 128
Mel-Frequency Cepstral Coefficients (MFCC) 151
Minimum Mean Square Estimator Short-Time Amplitude Spectrum Estimator (MMSE-STSA) 154
Missed Alarm Rate (MAR) 156-157
Mobile Health (mHealth) 54
multi-agent system (MAS) 230
Multi-delay Block Frequency Domain (MDF) 154
multimedia message service (MMS) 35
multiple access layer (MAC) 313
multiple dwelling unit (MDU) 173

N
Naïve-Bayes network 132
National Environmental Satellite, Data, and Information Service (NESDIS) 330
National Informatics Center (NIC) 272
National Oceanic and Atmospheric Administration (NOAA) 329
Neonatal Intensive Care Unit (NICU) 301, 308
nerve conduction studies (NCS) 11

O
online personal health 351, 353-354
Optical Laser Tracking System (OLTS) 66

P
Packet error rate (PER) 314, 318
patient unit (PU) 12
Pedestrian Dead Reckoning (PDR) 66
Peri-Ventricular Leukomalacia (PVL) 302
personal digital assistants (PDAs) 15, 39, 66
personalised health systems (pHealth) 49
physical layer (PHY) 30, 128, 313
polymerase chain reaction (PCR) 291
Post-neonatal 303-306, 309
Post Office Protocol (POP) 201
postural transitions (PTs) 67
printed circuit board (PCB) 35
professional mobile radio (PMR) 170

R
radio frequency identification (RFID) 86
Rapid Diagnostic Tests (RDTs) 291
Real-Time Biosurveillance Program (RTBP) 271-272
Real-time communications (RTC) 55
red blood cells (RBCs) 291
region of interests (ROI) 294
reinforcement learning (RL) 232
Respiratory Exchange Ratio (RER) 103
responsibilisation 351
Rivest, Shamir and Adleman (RSA) 38
RT3 Accelerometer 103

S
Safe Point Thinning Algorithm (SPTA) 307
Sahana Alerting Module (SAM) 278
Security Gateway (SeGW) 172
Service Level Agreements (SLAs) 176
Service Orient Architecture (SOA) 187
Seth Sukhlal Karnani Memorial (SSKM) 301, 308
short message service (SMS) 35
Signal to Noise Ratio (SNR) 152, 157
Simple Mail Transfer Protocol (SMTP) 201
simple object access protocol (SOAP) 55
software development kit (SDK) 39
specific absorption rate (SAR) 5
Support Vector Machines (SVM) 136

T
T-Cube Web Interface (TCWI) 275
terminal equipment (TE) 175
TERrestrial Trunked Radio (TETRA) 170

U
Ultra wide band (UWB) 117
Universal Mobile Telecommunication System (UMTS) 171
University of Tras-os-Montes and Alto Douro (UTAD) 107
Upper Lower Threshold (ULT) 93
Upper threshold (U-Threshold) 93
Upper Upper Threshold (UUT) 93
Urgency-based MAC (U-MAC) 3, 117
Index

V

Validation Protocol 137
virtual medical device (VMD) 20

W

web services languages (WSDL) 55
Weekly Epidemiological Returns (WER) 284
Weighted Fair Queuing (WFQ) 127
white blood cells (WBCs) 291
Wideband Code-Division Multiple Access (WCD-MA) 172
WikiSurgery 342-343, 348-349

Wireless Application Protocol (WAP) 273
Wireless Body Area Networks (WBANs) 2, 114
wireless body sensor based mesh network (WB-SMN) 88
wireless local area network (WLAN) 36
wireless medical telemetry service (WMTS) 313
Wireless Personal Area Networks (WPAN) 117, 128
wireless sensor based mesh networks (WSMN) 86
wireless sensors networks (WSN) 2
World Health Organization (WHO) 102, 149

Z

Zero Velocity Update (ZUPT) 65-66