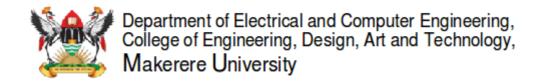**BSc in Computer Engineering**

CMP4204
Wireless Technologies

Annex 01

Table of Abbreviations

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Department of Electrical and Computer Engineering,
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2.5G	Between Second and Third Generation
2G	Second Generation
3GPP2	3rd Generation Partnership Project 2
3GPP	3rd Generation Partnership Project
3G	Third Generation
5GC	5G Core Network
5G-EIR	5G-Equipment Identity Register
802.11	IEEE Working Group for the development of WLAN
802.15	IEEE Working Group for the development of WPAN
802.16	IEEE Working Group for the development of WiMAX
802.2	IEEE Working Group for the development of Logical Link Control
AAA	Authentication, authorisation, and Accounting
ACK	Acknowledgement
ACL	Asynchronous ConnectionLess
ADSL	Asymmetric Digital Subscriber Line
AF	Application Function
AMA	Active Member Address
AM	Amplitude Modulation
AMF	Access and Mobility Management Function
AMPS	Advanced Mobile Phone System
ANSI	American National Standards Institute
AP	Access Point
APN	Access Point Name
ARA	Access Request Address
ASIC	Application Specific Integrated Circuit
ASN.1	Abstract Syntax Notation One
ATM	Asynchronous Transfer Mode
AuC	Authentication Centre
AUSF	Authentication Server Function
B2B	Basestation to Basestation
B2D	Basestation to Device
BCE	Binding Cache Entry
BNEP	Bluetooth Network Encapsulation Protocol
BS	Base Station
BSC	Base Station Controller
BSS	802.11 Basic Service Set
BSS	Base Station Sub-system

BTS	Base Transceiver Station
CA	Collision Avoidance
CCK	Complementary Code Keying
CDMA2000	Code division multiple access 2000
CDMA	Code division multiple access
CDMAone	CDMA one
CDR	Call Detail Record
CGF	Charging Gateway Function
CN	Core Network
CN	Correspondent Node
CPC	Continuous Packet Connectivity
CP	Control Plane
CRC	Cyclic Redundancy Check
CSCF	Call Session Control Function
CSMA	Carrier Sense Multiple Access
D2B	Device to Basestation
D2D	Device 2 Device
DAC	Device Access Code
dB	decibels
DIFS	Distributed Inter Frame Space
DL	Downlink
DSSS	Direct Sequence Spread Spectrum
EAP	Extensible Authentication Protocol
EDGE	Enhanced Data rates for GSM Evolution
EGPRS	Enhanced GPRS
eGTP	Evolved GTP
EIA	Electronic Industries Alliance
EIGRP	Enhanced Interior Gateway Routing Protocol
ELF	Extremely Low Frequency
eMBB	enhanced Mobile BroadBand
EM	Electro Magnetic
EMF	Electro Motive Force
eNodeB	Evolved Node B - Radio element in LTE
EPC	Evolved Packet Core
E-UTRAN	Evolved UTRAN
EV-DO	Evolution-Data Optimised
FBWA	Fixed Broadband Wireless Access

FCC	Federal Communications Commission
FDD	Frequency Division Duplex
FDMA	Frequency Division Multiple Access
FDM	Frequency Division Multiplex
FEC	Forward Error Correction
FHS	Frequency Hop Synchronisation
FHSS	Frequency Hopping Spread Spectrum
FM	Frequency Modulation
GEPON	Gigabit Ethernet Passive Optical Network
GFSK	Gaussian Frequency Shift Keying
GGSN	Gateway GPRS Support Node
GHz	Giga-Hertz
gNB-CU	gNB Central Unit
gNB-DU	gNB Distributed Units
gNB	Next Generation NodeB
GPON	Gigabit Passive Optical Network
GPRS	General Packet Radio Services
GRE	Generic Routing Encapsulation
GSM	Groupe Spécial Mobile
GTP	GPRS Tunnelling Protocol
GTPv2	GTP version 2
HCI	Host Controller Interface
HF	High Frequency
HiperLAN	ETSI standard for Wireless LAN similar to IEEE 802.11
HiperMAN	ETSI standard for Wireless MAN similar to IEEE 802.16
HLR	Home Location Register
HSDA+	High-Speed Packet Access +
HSDA	High-Speed Packet Access
HSDPA	High-Speed Downlink Packet Access
HSS	Home Subscriber Server
I-CSCF	Interrogating-CSCF
IEEE	Institute of Electrical and Electronics Engineers
IGP	Interior Gateway Protocol
IMSI	International Mobile Subscriber Identity
IMT-2000	International Mobile Telecommunications - 2000
IMT-2020	International Mobile Telecommunications – 2020
IMT-Adv	International Mobile Telecommunications - Advanced

IoT	Internet of Things
IP	Internet Protocol
IrDA	Infrared Data Association
IS-136	Interim Standard 136 (Digital AMPS)
IS-2000	Interim Standard 2000 (Cdma2000)
IS-856	Interim Standard 8560 (CDMA EV-DO)
IS-95	Interim Standard 95 (cdmaOne)
ISM	Industrial, Scientific and Medical
ISP	Internet Service Provider
ITS	Intelligent Transportation Systems
ITU	International Telecommunication Union
ITU-R	International Telecommunication Union - Radiotelecommunications
ITU-T	International Telecommunication Union - Telecommunications
JPEG	Joint Photographic Experts Group
kHz	kilo Hertz
L2CAP	Logical Link Control Applications Protocol
L2TP	Layer 2 Tunnelling Protocol
LLC	Logical Link Control
LMA	Local Mobility Anchor
LM	Link Manager
LMP	Link Manager Protocol
LNS	L2TP Network Server
LocDev	Service discovery application
LOS	Line of Sight
LTE	Long Term Evolution
MAC	Media Access Control
MAC	Medium Access Control
MAG	Mobile Access Gateway
MAN	Metropolitan Area Network
Mc/s	Megacycles per second
MHz	Mega Hertz
MIDI	Musical Instrument Digital Interface
MIMO	Multiple-Input Multiple-Output Antennas
MME	Mobility Management Entity
mMIMO	massive MIMO
mMTC	massive Machine Type Communications
MN	Mobile Node

MPEG	Moving Pictures Experts Group
MS	Mobile Station
MU-MIMO	Multi User MIMO
NEF	Network Exposure Function
NFV	Network Functions Virtualisation
NG-RAN	Next Generation - Radio Access Network
NIC	Network Interface Card
nLOS	Near Line of Sight
NLOS	Non Line of Sight
NMS	Network Management Subsystem
Node-B	A BTS in WCDMA
NOMA	Non Orthogonal Multiple Access
NRF	Network Function Repository Function
NR	New Radio
NSSF	Network Slice Selection Function
NSS	Network Switching Sub-system
OBEX	OBject EXchange
OFDM	Orthogonal Frequency Division Multiplexing
OSPF	Open Shortest Path First
OUI	Organisation Unique Identifier
PAN	Personal Access Network
PAPR	Peak to Average Power Ratio
PBA	Proxy Binding ACK
PBU	Proxy Binding Update
PCF	Policy Control Function
P-CSCF	Proxy-CSCF
PDA	Personal Digital Assistant
PDP	Packet Data Protocol
PDSN	Packet Data Serving Node
PGW	Packet Data Network Gateway
PHY	Physical Layer
PLMN	Public Land Mobile Network
PMA	Parked Member Address
PMIP	Proxy Mobile IP
PNAC	Port-based Network Access Control – 802.1x
PN	Pseudo Noise
PPP	Point-to-Point Protocol

PTM	Point to Multipoint
PTP	Point to Point
PVC	Poly Vinyl Chloride
QAM	Quadrature Amplitude Modulation
QoS	Quality of Service
QPSK	Quadrature Phase Shift Keying
RADIUS	Remote Access Dial-up User Service
RAN	Radio Access Network
RFCOMM	RF COMMunications protocol
RF	Radio Frequency
RIP	Routing Internet Protocol
RNC	Radio Network Controller
RPC	Remote Procedure Call
RS	Repeater Station
RTT	Radio Transmission Technology
SAE	System Architecture Evolution
SBC	Session Border Controller
SC-FDMA	Single Carrier Frequency Division Multiple Access
SCO	Synchronous Connection Oriented
S-CSCF	Serving-CSCF
SC	Superposition Coding
SCTP	Stream Control Transmission Protocol
SDM	Spatial Division Multiplexing
SDN	Software Defined Networking
SDP	Service Discovery Protocol
SEPP	Security Edge Protection Proxy
SGSN	Serving GPRS Support Node
SGW	Serving Gateway
SHF	Super High Frequency
SIC	Successive Interference Cancellation
SIM	Subscriber Identity Module
SIP	Session Initiation Protocol
SISO	Single In, Single Out
SMF	Session Management Function
SMS	Short Messaging Service
SQL	Structured Query Language
SRD	Short Range Device

SSB	Single Side Band
SSID	802.11 Service Set IDentifier
SS	Subscriber Station
STA	802.11 Station
SU-MIMO	Single User MIMO
SWR	Standing Wave Ratio
TCP	Transmission Control Protocol
TCS-AT	ATtention modem commands
TCS-BIN	Bluetooth Telephony Control protocol
TCS	Telephony Control Protocol
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
TDM	Time Division Multiplexing
TIA	Telecommunications Industry Association
TIFF	Tagged Image File Format
UDM	Unified Data Management
UDP	User Datagram Protocol
UDR	Unified Data Repository
UDSF	Unstructured Data Storage Function
UE	User Equipment
UHF	Ultra High Frequency
UL	Uplink
UMB	Ultra Mobile Broadband
UMTS	Universal Mobile Telecommunications System
UPF	User Plane Function
UPF	User Plane Functions
UP	User Plane
URLLC	Ultra Reliable Low Latency Communications
USA	United States of America
UTRAN	Universal Terrestrial Radio Access Network
VHF	Very High Frequency
VLF	Very Low Frequency
VoLTE	Voice over LTE
WAP	Wireless Application Protocol
W-CDMA	Wideband Code Division Multiple Access
WEP	Wired Equivalent Privacy
WiFi	Wireless Fidelity (802.11)

WiMAX	Worldwide Interoperability for Microwave Access (802.16)
WISP	Wireless Internet Service Providers
WLAN	Wireless Local Area Network
WPA2	Wi-Fi Protected Access 2
WPAN	Wireless Personal Access Network
WPA	Wi-Fi Protected Access