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List of Abbreviations

1G	First Generation
2G	Second Generation
3D	Three Dimension
3G	Third Generation
3GPP	3rd Generation Partnership Project
4G	Fourth Generation
APPs	A Posteriori Probabilities
ARP	Almost Regular Permutation
ARQ	Automatic Repeat reQuest
BER	Bit Error Rate
BPSK	Binary Phase Shift Keying
CDMA	Code Division Multiple Access
FDD	Frequency Division Duplex
FPGA	Field Programmable Gate Array
GB	Giga Bit
GSM	Global System Mobile
HRPD	High Rate Packet Access
HSPA	High Speed Packet Access
IEEE	Institute of Electrical and Electronics Engineers
IMT-2000	International Mobile Telecommunications for the year 2000
IP	Internet Protocol
ITU-R	International Telecommunication Union for Radio communication
LAN	Local Area Network
LLR	Log likelihood Ratios
LTE	Long Term Evolution
MAN	Metropolitan Area Network
Matlab	Matrix Laboratory
MHz	Mega Hertz
MIMO	Multiple Input Multiple Output

OFDMA	Orthogonal Frequency Division Multiple Access
QAM	Quadrature Amplitude Modulation
QPP	Quadratic Permutation Polynomial
QPSK	Quadrature Phase Shift Keying
SCFDMA	Sub Carrier Frequency Division Multiple Access
SISO	Soft Input Soft Output
TDD	Time Division Duplex
TV	Television
UMB	Ultra Mobile Broadband
UTRA	Universal Terrestrial Radio Access
VLSI	Very-large-scale integration
WCDMA	Wide Code Division Multiple Access
WiMax	Mobile Worldwide Interoperability for Microwave Access
WRC2007	World Radio communication Conference 2007