LIST OF ACRONYMS AND PRINCIPLE SYMBOLS

T_s	OFDM symbol period
T_F	Effective OFDM symbol period or the FFT/IFFT duration
T_{CP}	Guard time
f	Frequency
B	Bandwidth
ΔB	Excess bandwidth
f_c	Carrier Frequency
f_d	Doppler spread Frequency
f_n	Nyquist bandwidth
f_s	Sampling Frequency
R	Transmission rate
P_{ave}	Power average of transmitted signal
N	Number of subcarriers
d	Input data
β	Roll-ofactor
σ	Variance of a signal
W_N^k	Twiddle Factor
Eb	Energy per bit
$\bar{\tau}$	Mean excess delay
σ_τ	RMS delay spread
B_c	Coherent Bandwidth
$H_e(f)$	Equalizer Frequency Response
$H_{ch}(f)$	Channel Frequency Response
λ_i	i^{th} Eigen value of covariance matrix
P	Power
K	Rician K-factor
FDM	Frequency Division Multiplexing
OFDM	Orthogonal Frequency Division Multiplexing
IEEE	Institute of Electrical and Electronics Engineers

FFT	Fast Fourier Transform
OFDMA	Orthogonal Frequency Division Multiple Access
QAM	Quadrature Amplitude Modulation
QPSK	Quadrature Phase Shift Keying
CP	Cyclic Prefix
Sc-OFDMA	Scalable Orthogonal Frequency Division Multiple Access
IFFT	Inverse Fast Fourier Transform
ISI	Inter Symbol Interference
ICI	Inter Carrier Interference
2D-FFT	Two Dimensional Fast Fourier Transform
ADSL	Asynchronous Digital Subscriber Loop
DSL	Digital Subscriber Loop
MU-OFDMA	Multi User OFDMA
BER	Bit Error Rate
SNR	Signal to Noise Ratio
AWGN	Additive White Gaussian Noise
WLAN	Wireless Local Area Network
MIMO	Multiple Input Multiple Output
ADFE	Adaptive Decision Feedback Equalizer
LMS	Least Mean Square
RLS	Recursive Least Square
CMA	Constant Modulus Algorithm
FPGA	Field Programmable Gate Array
MMSE	Minimum Mean Square Error
CFR	Channel Frequency Response
MAC	Medium Access Control
MSE	Mean Square Error
TTL	Time Tracking Loop
RFI	Radio Frequency Interference
DVB-T	Digital video Broad Casting Terrestrial

DVB-H	Digital Video Broad Casting Handheld
DDS	Direct Digital Synthesizer
HDL	Hardware Description Language
PSK	Phase shift Keying
RMS	Root Mean Square
ITU	International Telecommunication Union
ETSI	European Telecommunication Standards Institute
DFT	Discrete Fourier Transform
TDMA	Time Division Multiple Access
CDMA	Code Division Multiple Access
FDMA	Frequency Division Multiple Access
SDMA	Space Division Multiple Access
MAI	Multiple Access Interface
CAS	Carrier Allocation Scheme
SCAS	Sub-band Carrier Allocation Scheme
ICAS	Interleaved Carrier Allocation Scheme
UE	User Equipment
PHY	Physical Layer
DSP	Digital Signal Processing
PLD	Programmable Logic Device
SFD	Signal Flow Diagram
SFG	Signal Flow Graph
DIT-FFT	Decimation in Time Fast Fourier Transform
DIF-FFT	Decimation in Frequency Fast Fourier Transform
FIFO	First in First out
SIPO	Serial in Parallel out
LOS	Line of Sight
UHF	Ultra-High Frequency
EDK	Embedded Development Kit
USB	Universal Serial Bus

UCF	User Constrained Files
PDP	Power Delay Profiles
RTL	Register Transfer Logic
ICON	Integrated Controller
ILA	Integrated Logic Analyzer
LUT	Look Up Table
PAPR	Peak Average Power Ratio
CLB	Configuration Logic Block
IOB	Input-Output Blocks
ISE	Integrated Software Environment
DUT	Device under Test