

LIST OF NOTATIONS

Symbols	Definition
b	Information bits
$\hat{\mathbf{b}}$	Expected codewordbits
$\hat{\mathbf{c}}$	Expected codewordbits
c	Codeword bits
C	Check nodes
$\tilde{\mathbf{C}}$	Extension check nodes
<i>CSI</i>	Channel state information
d_v	Degree of variable nodes
d_c	Degree of check nodes
E	Expected
<i>EP</i>	Extended parity
<i>exp</i>	Exponen
\mathcal{F}	Fraction
\mathcal{G}	Global iteration
G	Generator matrix
<i>h</i>	Path
H	Parity check matrix
I	Identity matrix
<i>I</i>	Core check iteration
I_A	<i>Apriori</i> mutual information
I_E	Extrinsic mutual information
I_P	<i>Posteriori</i> mutual information
<i>J</i>	J Function
<i>K</i>	Information bit length
L_A	<i>Apriori</i> Log likelihood Ratio
L_E	Extrinsic Log likelihood Ratio
L_{ch}	Channel Log Likelihood Ratio
\mathcal{L}	Extension check iteration
<i>M</i>	Mapper
n	noise
<i>N</i>	Block-length
P	Parity matrix
<i>r</i>	Attempt of IRHARQ
V	Variable nodes

Symbols	Definition
\tilde{V}	Extension variable nodes
\mathbf{x}	Transmitted signal
\mathbf{y}	Received signal
σ_{ch}	Bit-error rate
Π	Interleaver
z	C-BPSK symbol reference
Z	Liftingsize
Λ_V	Degree distribution of variable nodes
Ω_C	Degree distribution of check nodes
Γ	Shifting number