

Abbreviations and Nomenclature

CBE	Cell Broadband Engine
DS-CDMA	Direct Sequence Code Division Multiple Access
EIB	Element Interconnect Bus
GFLOPS	10^9 Floating Point OPERations per Second
LS	Local Storage
MFC	Memory Flow Controller
PPU	Power Processing Unit (PowerPC)
SIMD	Single Instruction Multiple Data
SPU	Synergistic Processing Unit
Quadword	128 bit

Mathematical Key

\hat{d}	Vector of Data Estimates
d_{U0S1}	Input Data, for user 0 symbol 1
C_{U0S1M2}	Multipath Channel Gain, for User 0, Symbol, 1 Multipath 2
O_{U0S1M2}	Spreading and Scrambling Sequence, for User 0, Symbol 1 Multipath 2
p_0	Scrambling Sequence, for cell 0
s_0	Spreading Sequence, for user 0
μ	Multiplications
α	Additions
ms	10^{-3} seconds
$a\%b$	a modulo b
K, N	Users = 128, Symbols = 300
M, S	Multipaths = 16, Spreading code length = 128
T_d	Maximum delay = 127