

An finite-state Markov channel model for ACM scheme in WiMAX

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Abstract: The paper derives a more accurate upper bound for BER for M-QAM than is currently used in the literature. This allows a more thorough analysis of the power adaptation to fading conditions for optimization of spectral efficiency. By taking into account the effect of error coding gain on power adaptation, a 7-state FSMC model for the implementation of the adaptive modulation and coding scheme in WiMAX is proposed. ©2009 IEEE.

Author Keywords: Adaptive modulation and coding; Finite state Markov channel model; WiMAX; Wireless communications

Index Keywords: Adaptive modulation and coding; Adaptive modulation and coding schemes; Error-coding; Fading conditions; Finite state Markov channels; Power adaptation; Spectral efficiencies; Upper Bound; WiMax wireless; Communication channels (information theory); Delta modulation; Interoperability; Quadrature amplitude modulation; Spectrum analyzers; Wimax; Adaptive modulation

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