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LMSC的六状态Markov模型的平均BER的理论分析与仿真

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Theoretical analysis and simulation of the average BER for Six-State Markov Model on Land-Mobile Satellite Channels

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摘要 理论上分析了陆地移动卫星信道(LMSC,Land-MobileSatelliteChannel)在采用六状态马尔科夫(Markov)模型情况下的平均BER(Bit Error Rate,误码率),并分别得到了没有采用分集和采用L分支的MRC分集(Maximal Ratio Combining,最大比合并)情况下平均BER的闭环表达式.在不同环境条件下,并考虑采用分集接收和不采用分集接收时,对BPSK(Binary Phase-Shift Keying,二进制相移键控)调制下的六状态和两状态的平均BER进行仿真比较.通过仿真验证了六状态Markov模型的有效性.

关键词: 六状态Markov模型 陆地移动卫星信道 BER(误码率) MRC(最大比合并)

Abstract: Theoretical analysis of the BERunder Land-Mobile Satellite Channel(LMSC) circumstances using Six-State Markov Model was presented.It is also calculated the close-form expression of BER when receiving diversity was not used and the close-form expression of BER when L-Branch Micro-Diversity with Maximal Ratio Combining(MRC) was used.It is compared the BERbetween Six-State Markov Model and Two-State Markov Model under BPSK modulation when receiving diversity was adopted or was not adopted.The Six-State Markov Model was proved to be valid by the simulation.

Key words:

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