

Coordinate Change and SAG MCMA Equalizer in the Mobile Satellite Communication System

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Abstract— In this paper, we propose the coordinate change schemes for improving the performance of blind equalizer such as MCMA (modified constant modulus algorithm) and SAG (Stop-and-Go) MCMA which compensate for ISI channel effect. ISI (inter symbol interference) is generated due to user's movement in the mobile satellite communication environment. Satellite communication systems do not use pilot signals for channel estimation. Blind equalization techniques such as MCMA and SAG-MCMA are well known that it is possible to estimate and to compensate for channel without pilot signals. It is necessary to improve the blind equalizer performance. Therefore, we propose the coordinate change schemes. We confirm that this proposed method has better MSE performance than that of conventional MCMA and SAG MCMA.

Keyword— *Blind equalizer, Coordinate change, MSE performance, MCMA; Stop and Go*



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