ADVANCED DOUBLE PREDICTOR DIFFERENTIAL PULSE CODE MODULATION IMAGE TRANSMISSION SYSTEM OVER FADING CHANNEL

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ABSTRACT

IN THIS STUDY, WE USE QUADTREE SEGMENTATION METHOD TO IMPROVE THE NON-STATIONARY STATIST -IC CHARACTERISTICS OF DIGITAL IMAGE MODELS. THE DOUBLE PREDICTOR DIFFERENTIAL PULSE CODE MODULATION (DP-DPCM)SYSTEM CAN REDUCE THE QUANTIZATION ERROR THAN THAT IN TRADITION DIFFER -ENTIAL PULSE CODE MODULATION (DPCM) SYSTEM. THEREFORE, DP-DPCM ALGORITHM CAN POSSESS BETT -ER DATA COMPRESSION RATIO AS WELL AS INCREASE SYSTEM TRANSMISSION RATE. THE TRANSMISSION MEDIUM IS MODELED AS A FADING COMMUNICATION CHANNEL AND QUADRATURE PHASE SHIFT KEYING(QPSK) MODULATION IS ADOPTED IN THE STUDY. FOR CHANNEL CODING,WE USE CONVOLUTION ENCODER AND MAX IMUM-LIKELIHOOD VITERBI HARD DECISION DECODER. THE CHANNEL CODING SCHEME IS TO PROTECT THE TRANSMITTED SOURCE DATA AND TO REDUCE BIT ERROR RATE (BER) IN FADING CHANNEL.PERFORMAN -CE OF THIS ADVANCED DOUBLE PREDICTOR DIFFERENTIAL PULSE CODE MODULATION IMAGE TRANSMISSIO -N SYSTEM OVER FADING CHANNEL IS EVALUATED IN THIS RESEARCH.

Keywords : QUADTREE SEGMENTATION, NON-STATIONARY STATISTICAL, DOUBLE PREDICTOR DIFFERENTIAL PULSE CODE MODULATION, DIFFERENTIAL PULSE CODE MODULATION, QUADRATURE PHASE SHIFT KEYING,FADING CHANNEL.

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