

## Identification of signatures transmitted over rayleigh fading channel by using hmm and rle

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### Abstrak

The Hidden Markov Model (HMM) is a frequently used tool in scientific research for recognizing pattern. This study discusses signature recognition using HMM where the signature image is transmitted from the remote station to the headquarter office by wireless because the remote station was not provided by the original signature as a reference. Generally, the transmission of radio communication has been corrupted with Additive White Gaussian Noise (AWGN) over the Rayleigh fading channel. To reduce the number of bits in the bitstream, the signal prior to transmission was compressed by means of run-length encoding (RLE), also known as source coding. The signature image detected from the receiver was processed in the computer using the HMM. The successful rate of recognition was 0-36% without compression and 60-76% with compression.