

## ABSTRACT

IS-127 *Enhanced Variable Rate Code (EVRC) Rate Determination Algorithm (RDA)* is a standard or protocol governing voice activity detection (VAD) in *Code Division Multiple Access (CDMA)* communication system and is issued by the TIA/EIA standard. In a transmission system, saving of channel capacity telecommunications network is essential, it is used for VAD to increase channel capacity by reducing the average speed of sound transmission.

To implement VAD is to achieve 0% performance level of *Overall Detection Error Rate (OVER)* is extremely difficult, this is because the voice signal has the characteristics of random probability and the existing noise environment of very strong influence it even has a noise that has characteristics similar to the original sound signal

In this thesis use *Hidden Markov Model (HMM)* method to get the performance of IS-127 EVRC RDA. This result of performance extremely good which OVER performance reach under 10%. This performance has get from the test using three noise and more than 0 dB of levels SNR.

**Keyword:** IS-127 EVRC, Voice Activity Detection, CDMA, TIA/EIA, SDER, NDER, OVER