ARMA MODELING FOR HF CHANNEL LINK MALANG – SURABAYA

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ABSTRACT

ARMA modeling of High Frequency channels is presented. Different frequency spectrum and distance can cause different propagations characteristic. In addition, HF radio communications are strongly influenced by the conditions in the layers of the ionosphere. The HF channel used in this study is based on data from channel measurement along the link from Malang to Surabaya, which is 82.4 km long at 6.3 MHz.

The time series measurements are divided into segments, each 10 minutes long, in which the variation can be considered statistically stationary. This is done to allow ARMA modeling to each stationary segment.

HF propagation which states that it is influenced by the conditions of the time. Where the channel HF attenuation measurement is lower than the attenuation on the afternoon and evening.

Keywords: HF channel, frequency, ARMA model