

Four-ivory Unidirectional antenna is one of multi element antennas. To help this antenna's development, it need to be formulated mathematically in order to understood easily and seen the result directly without doing measurements. This mathematical formulation is represented through matlab program so that it will be easier and can be a reference for further research.

This software specifications' are simulate antenna's performance in 300MHz -3000 MHz of frequencies, unidirectional radiation pattern, and using binomial propogation matching space.

In this final project, there have been analyzed radiation pattern of Four-ivory antenna and there have been created a software using matlab to determine radiation pattern, impedance, bandwidth, and gain from Four-ivory antenna. Based on simulation result, there have been analyzed Four-ivory antenna's characteristic like unidirectional radiation pattern shaped, gain which is influenced by the length of antenna ( $\ell$ ) and space between (s), and impedance which is influenced by the length of  $n^{\text{th}}$  antenna appropriate with binomial transformator formula.

Keywords : unidirectional Four-ivory, binomial, matab

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