

ABSTRACT

The paper presents the mathematical modeling and simulation of communication tower grounding system during lightning strike under MATLAB/SIMLINK environment. The transmission line model is used to simulate both the tower and the grounding system. Different methods of grounding such as vertical rod, horizontal rectangular grounding and the combination of the two are studied under lightning condition. Different conditions of the soil and the effect of soil resistivity are considered and compared. The result is voltage, current and impedance variations at the point of discharge and other selected points.