

## ***Protection Application Issues near Strong Grounding Paths***

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This paper goes through the event analysis of a recent undesired trip of a line-distance relay applied near a large 400 MVA wye-grounded/delta generator step-up transformer. The generator was off-line setting up a large remote ground source (without positive or negative sequence currents) that undesirably affected the relay operation. This paper utilizes the recorded fault data and symmetrical component sequence networks to analyze the fault. Detailed lists of observations of the relay's analog (currents and voltages) and digital logic signals are developed from which a cause and solution are quickly determined. In addition other possible relay application problems are identified.