## **Voltage Sag Source Location Based on Voltage Measurements Only**

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This paper introduces an alternative method for voltage sag source location based on voltage information only. The source is located considering the sag magnitude at the primary and secondary side of a transformer. A comprehensive review of previously proposed methods based on voltage and current measurements is presented. The performance of the proposed method is compared with the previous ones using PSCAD /EM TDC on a model of a regional network including transmission and sub-transmission levels.

Moreover, the sag magnitude method is applied on a set of measurements taken from the regional network during a one year sag survey. The results show the good performance of the new method and its unique applicability in cases where only voltages are recorded, such as the sag survey presented.

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