A Fully-Automated Disturbance Analysis Vision for the Smart Grid Based on Smart Switch Data

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Abstract : The deployment of smart grid devices such as smart meters and smart switches (SS) supported by a reliable and fast communications system makes automated distribution possible, and thus, provides great benefits to electric power consumers and providers alike. However, more research is needed before the full utility of smart switch data is realized. This paper presents new automated switching techniques using SS within the electric power grid. A concise background of the SS is provided, and operational examples are shown. Organization and presentation of data obtained from SS are shown in the context of the future goal of total automation of the distribution network. The description of application techniques, the examples of success with SS, and the vision outlined in this paper serve to motivate future research pertinent to disturbance analysis automation.