**RADIAL FEEDER PROTECTION**

**ABSTRACT**

Power distribution systems are that portion of electrical systems that connects customers to the source of bulk power (such as distribution substation). Radial distribution systems are characterized by having only one path for power to flow from the source to each customer. A typical distribution system consists of several substations which each includes one or more feeders. A three-phase primary feeder extends away from a substation, and there are many lateral feeders (three-phase, two-phase or single-phase) extending away from the primary feeder. There are loads, transformers, shunt capacitor banks, and protective devices in a distribution feeder.

There are a large number of components in distribution systems and these components age over time. An Case study of applying discrete electromechanical or electronic relays to a radial distribution circuit versus applying digital multifunction protective relays. The study will address engineering time, methods of setting each type of relay, installation time, and periodic maintenance intervals.

The purpose of this paper is to highlight the advantages of having numeric multifunction protection in place when Distributed Generation is added to a radial distribution circuit.

Advantages include extra protection elements (no new feeder relaying required for the addition of DG) and the availability of operating data through local and remote communications.

**SUBMITTED BY –**

**SUBHAM GANGDEB**

**ELECTRICAL ENGG.**