This thesis described the design of coordinative protection system, which consists of two sections, i.e. the theoretical background study and the developed the software. In the theoretical section, a comprehensive study, in the relevant fundamentals on the topic including detailed setting calculations on the selected devices to be used, is thoroughly presented in this report. For the other section, the software is intended to facilitate the user in designing electrical protective systems through the "Overcurrent Coordinative Program" written in VISUAL BASIC version 3. This program is divided into 3 main parts :

    1. Creating the single-line diagram : The users can select a complete set of electrical protective devices used in the market today. After completing the construction of the diagram, the program will ask for the specifications of the devices used in the provided tables. These values will be used for calculating short-circuit current in the next part of the program.

    2. Calculating short-circuit current in radial distribution system : After filling all the data in and specifying fault location in the first part, program will model the circuit of electrical system on screen. Then, users can apply a special apparatus, designed to facilitate the users in finding out the short-circuit current at any fault location.

    3. Analysing and designing characteristic curves of the protective devices : Characteristic curves of different devices in various sizes can be readily loaded from the program memory according to the equipment patterns created on the single-line diagram. Curve coordination can be easily accomplished by shifting relevant curves for each device.
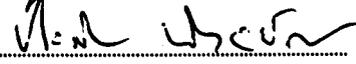
    These three parts of the program work together as a single unit. The users can save each part designed for future correction or used as references. Moreover, the results can be printed through the PRINT function in the program.

ภาควิชา.......วิศวกรรมไฟฟ้า.......................... ลายมือชื่อนิสิต..

สาขาวิชา.......ระบบพลังงาน............................ ลายมือชื่ออาจารย์ที่ปรึกษา.................................

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