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KEY WORD : IN-CIRCUIT EMULATOR/MICROPROCESSOR DEVELOPMENT SYSTEM

SEKSAN WATTNACHOTE : IN-CIRCUIT EMULATOR FOR Z-80 AND 8085 MICROPROCESSORS. THESIS ADVISOR : DR.SOMBOON CHONGCHAIKIJ. THESIS COADVISOR : ASSO.PROF.KRIDSADA VISAVATEERANON,

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This thesis presents the design and construction of a microprocessor in-circuit emulator, which is an important tool for the development of a microprocessor-based system, the equipment will be pluged in instead of microprocessor in a target system. The in-circuit emulator can be used for Z-80 and 8085 8-bit microprocessors. 64 kilobytes of internal memory are available to the user by assignable blocks of 2 kilobytes each. The circuit functions include program execution with breakpoint, single step and real time trace which will record status of buses. User interface is made by using an IBM PC or dump terminal. The prototypes are used effectively in developing hardware and software of microprocessor-based system in laboratory and the knowledge acquired in this project can be applied to the design and development of other microprocessors in-circuit emulators.