

KEY WORD : FUNCTION CHART/IEC848/GRAFCET/LADDER DIAGRAM/PROGRAMMABLE CONTROLLER/PLC

THANATE PANICH-PAT : DEVELOPMENT OF A FUNCTION CHART SOFTWARE FOR A PROGRAMMABLE

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Function chart is a new language for describing the sequential control of a machine in form of diagrams. The diagrams display the operations at each control step and the conditions for changing steps. This type of diagram can be easily compiled into boolean equations by comparing it with the state transition diagram of flip-flops. Therefore, function chart can be applied to any kind of machine by just recompiling those boolean equations into the connection diagram of its internal hardware.

This research is a development of a function chart application software on a microcomputer. This software is written in Pascal programming language and is designed to be a tool for writing a function chart diagram to be used with a programmable controller. The developed software consists of a graphic editor, a compiler, a transfer utility and a printer routine. The user can use the editor to draw diagrams. The compiler can compile the diagrams into boolean equations, mnemonic language statements and machine code of a programmable controller. The transfer utility is used to transfer the compiled code to the programmable controller and the printer routine is used to print out related documents.