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On methods for realizing a finite automaton whose cyclic nature is determined by the variation of the input state. (English. Russian original) [Zbl 0096.33104](#)

Autom. Remote Control 21, 1126-1143 (1961); translation from *Avtom. Telemekh.* 21, 1576-1594 (1960).

Summary: There are considered three methods of realization, which are economic from the viewpoint of number of states, of a finite automaton set by an equation (or table) and operating in a time pace regime caused by change of the input states of the automaton. The methods are distinguished by an amount of information which defines the automaton input. The first method (Huffman method) intends minimum information, i. e. information on input state at the moment only; the second method supposes introduction into the automaton of additional information on moments of changing input state; the third method intends introduction into the automaton of information on input state at the moment and at some preceding moment of time.

It is shown that one can get the most economic automaton using the third method.

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MSC:

68Q45 Formal languages and automata