

FLEXIBLE INTERRUPTING SYSTEMS

A.P. Samoylenko, Taganrog State Radioengineering University; A.G. Chaptsev, Taganrog State Radioengineering University

The analysis of traditional structure of interrupting system of control computer (CC) shows that nowadays the problem related to flexible interrupting systems (IS) with dynamical changeable priority is very important. Such systems permits to function more effeciently in the real time scaleif compared with well known realizations. The mathematical techniques of IS models were exploited on the basis of single channel mass service sytems (MSS) in order to recieve the extreme characteristics of standart interrupting algorithm namely with absolute and relative priorities. IS with changeable priority can realize any famous interrupting algorithm of CC. On the basis of analys of system parameters CC selects the most suitable once at given instant. Moreover? the variant of dynamic redistribution of priorities between interrupting requests (IR) was suggested which depends on residence time each one inside the system and also on changing character of requests during the allowed time. The designing of flexible interrupting system is based on fuzzy logic, and in particular on orderly logic. It was introduced the comperehension of orderly logical determinants that permit to solve the problem of systems dimension during IS creation. This IS permits to increase the quantity of interrupting levels in insignificant hardware expenses. In this case the top limit of interrupting levels is determined as $n!$, where n - infomation capacity of the systems. Complementary functional connections inside IS permit to realize any priority, that central processor states.