Design and implementation of a complicated real-time system, completely free of fault is difficult and fault tolerance methods require features which are not usually follow the characteristics of a real-time systems. To deal with this issue, an appropriate automatic classification system to detect and diagnosis faults in run time should be utilized. This fault detection system must be independent of main real-time system and based on the received information it controls the behavior of real-time system. Type and content of this information has a main role to monitor and control real-time system and must be selected in such a way to determine the overall system status in normal and abnormal conditions. In this paper, after briefly discuss the major types of faults that can be happened in real-time systems, different methods of fault detection and isolation in real-time system are studied and evaluated.


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**Index Terms**

Computer Science  
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Real-time systems, Fault, Fault Detection, Fault Isolation.