Abstract

The main objective of the paper is to improve the Round Robin (RR) algorithm using dynamic ITS by coalescing it with Shortest Remaining Time Next (SRTN) algorithm thus reducing the average waiting time, average turnaround time and the number of context switches. The original time slice has been calculated for each process based on its burst time. This is mostly suited for
soft real time systems where meeting of deadlines is desirable to increase its performance. The advantage is that processes that are closer to their remaining completion time will get more chances to execute and leave the ready queue. This will reduce the number of processes in the ready queue by knocking out short jobs relatively faster in a hope to reduce the average waiting time, turn around time and number of context switches. This paper improves the algorithm [8] and the experimental analysis shows that the proposed algorithm performs better than algorithm [6] and [8] when the processes are having an increasing order, decreasing order and random order of burst time.

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**Index Terms**

Computer Science  Operating Systems
A New Dynamic Round Robin and SRTN Algorithm with Variable Original Time Slice and Intelligent Time Slice for Soft Real Time Systems

**Key words**

Process | Real Time Operating System
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Waiting Time
Turnaround Time
Context Switches
Intelligent Time Slice (ITS)