Realtidssystem

Ett system vars korrekthet inte enbart bygger på det beräkningsmässiga resultatet utan också på när resultatet kom.

Processklassificering

- Hard Realtime Tasks
- Soft Realtime Tasks

- Periodiska realtidsprocesser
- Icke periodiska realtidsprocesser

Krav på realtidsOS

- Determinism
- Reaktionstid
- Användarkontroll
- Pålitlighet och feltolerans

Static table-driven approach

Performs a static analysis of feasible schedules of dispatching. The result of the analysis is a schedule that determines, at run time, when a task must begin execution.

Static priority-driven preemtive approach

Again a static analysis is performed, but no schedule is drawn up. Rather, the analysis is used to assign priorities to tasks, so that a traditional priority-driven preemtive scheduler can be used.

Dynamic planning-based approach

Feasibility is determined at run time (dynamically) rather than offline prior to the start of execution (statically). An arriving task is accepted for execution only if it is feasible to meet its time constraints. One of the reults of the feasibility analysis is a schedule or plan that is used to decide when to dispatch this task.

Dynamic best effort approach

No feasibility analysis is performed. The system tries to meet all deadlines and aborts any started process whose deadline is missed.