USING RT–CORBA SCHEDULING SERVICE AND PRIORITIZED NETWORK TRAFFIC TO ACHIEVE END–TO–END PREDICTABILITY

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Abstract:
Computing systems are increasingly distributed, real–time, and embedded (DRE) and must operate under highly unpredictable and changeable conditions. To provide predictable mission–critical quality of service (QoS) end–to–end, QoS–enabled middleware services and mechanisms have begun to emerge. It is also, widely known that Control Area Networks (CAN) are used in real–time, distributed and parallel processing which cover manufacture plants, humanoid robots, networking fields. We show how prioritization of messages over the physical CAN network can be achieved, when adopting the use of RT–CORBA distributed scheduling service which implements a dynamic scheduling policy to achieve end–to–end predictability and performance.