Abstract

As the number of node and the speed of processor increases, the performance of Multiprocessor system, based on bus, is restricted by limit of bus itself. So that new interconnection network topology is needed, and ring based Multiprocessor system using SCI protocol, proposed by IEEE, is widely used.

In this paper, I will evaluate the performance of dual ring snooping Multiprocessor system which can make up for the weak point in the directory based SCI protocol. In dual ring snooping Multiprocessor system maintain the coherency of memory and cache using snooping, and several transaction can be issued simultaneously by using point-to-point link based ring.

In this paper, I examine the protocol used in dual ring snooping Multiprocessor system and evaluate the performance of the dual ring snooping Multiprocessor system by comparing it's execution time and ring utilization with the execution time and the ring utilization of the dual ring SCI based Multiprocessor system by using Mint, a program-driven simulator.

Keyword : Multiprocessor system, dual ring, snooping, interconnection network, point-to-point link, MINT

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