Docket #: S12-138

High-Radix Interprocessor Communications System and Method

Stanford researchers and Cray Inc. have patented a highly efficient system and method for routing packets in a multiprocessor computer system. This high-radix communication system is detailed in US Patent US 8,184,626 B2.

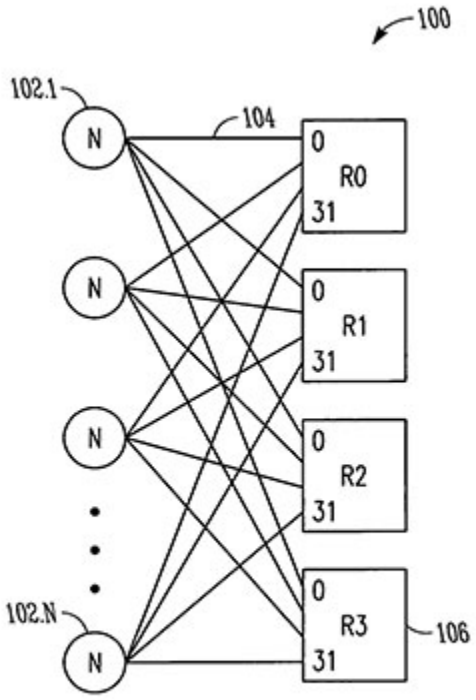


FIG. 1

Computer system described above is designed to run demanding applications with high communication requirements. It is a distributed shared memory multiprocessor built with high performance, high bandwidth custom processors. The processors support latency hiding, addressing and synchronization features that facilitate scaling to large system sizes.

Related Technolgies from The Dally Lab:

Stanford Docket S14-246 "Probabilistic Cache Replacement to Reduce Cache Misses"

Stanford Docket S12-374 "Power electronics system that harvests excess power from unbalanced photovoltaic modules to boost overall efficiency"

Stanford Docket S11-305 "Speculative Reservation Protocol"

Stanford Docket S07-039 "Flattened Butterfly: Cost-efficient High-Radix Topology"

Stanford Docket S07-359 "Technology-Driven, Highly-Scalable Dragonfly Topology"

Applications

- High performance interconnection networks
- Multiprocessor computer systems
- Data communication networks

Advantages

- High performance
- High efficiency
- Topology and packaging scheme enables very flexible provisioning of network bandwidth

Patents

- Published Application: 20090292855
- Issued: 8,184,626 (USA)

Innovators

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