



## A Cache Technique for Synchronization Variables in Highly Parallel, Shared Memory Systems (Classic Reprint) (Paperback)

By Wayne Berke

Forgotten Books, 2017. Paperback. Condition: New. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*. Excerpt from A Cache Technique for Synchronization Variables in Highly Parallel, Shared Memory Systems Caches have traditionally been used to lower the average latency of memory access. When paired with the individual cpus of a multiprocessor, they have the additional benefit of reducing the overall load on the processor-memory interconnection. Since synchronization variables have been identified as centers of memory contention, we have looked at methods of utilizing the cache to minimize this effect. A technique of polling the cache is proposed to deal with this problem. Consistency within the caches is maintained with a bottleneck-free update facility that exploits the topology of the multistage network. Since an indiscriminate broadcast-write policy can lead to severe network congestion at high levels of parallelism, we selectively invoke these updates from the software. We illustrate our methods with a number of useful synchronization algorithms and present simulation results that support the feasibility of our design. In addition to providing support for basic synchronization operations, our methodology is generally applicable to all parallel algorithms that utilize polling. About the Publisher Forgotten Books...

DOWNLOAD



READ ONLINE

[ 1.91 MB ]

### Reviews

*Completely one of the better pdf I have got possibly go through. I really could comprehend every little thing using this composed ebook. It is extremely difficult to leave it before concluding, once you begin to read the book.*

-- **Torey Kreiger**

*It is a of the best book. Yes, it can be perform, nevertheless an amazing and interesting literature. You may like the way the article writer publish this ebook.*

-- **Wava Hettinger**