Annotated Bibliography on Causal Consistency

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1 Specification

Ahamad, M., Neiger, G., Burns, J. E., Kohli, P., and Hutto, P. W. Causal memory: Definitions, implementation, and programming. *Distributed Computing 9*, 1 (1995), 37–49

The original definition of causal memory with respect to read-write registers. It also contains a classic implementation using vector clocks, which is, however, not fault-tolerant.

Perrin, M., Mostefaoui, A., and Jard, C. Causal consistency: Beyond memory. In *Proceedings of the 21st ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP '2016)* (2016), 26:1–26:12

This paper discusses three variants of causal consistency, namely . . ..

Terry, D. B., Demers, A. J., Petersen, K., Spreitzer, M., Theimer, M., and Welch, B. W. Session guarantees for weakly consistent replicated data. In *Proceedings of the Third International Conference on Parallel and Distributed Information Systems*, PDIS '94, IEEE Computer Society (USA, 1994), 140–149

This paper disusses four session guarantees (RYW, MR, WFR, MW) and their implementations.

Brzezinski, J., Sobaniec, C., and Wawrzyniak, D. From session causality to causal consistency. In *12th Euromicro Conference on Parallel, Distributed and Network-Based Processing, 2004. Proceedings.* (2004), 152–158

This paper discusses relationship between session guarantees and causal consistency.

2 Theory

Burckhardt, S., Gotsman, A., and Yang, H. Understanding eventual consistency. Tech. Rep. MSR-TR-2013-39, March 2013

This paper presented a flexible specification framework for eventually consistent systems.

3 Protocols (and Clocks)

4 Systems

5 Checking

6 Verification