
CS 152
Computer Architecture and Engineering

Lecture 16 – Error Correcting Codes

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F05 TA Notes: Final Project Checkoff

The SyncMeisters had everything working besides the test file hammer. However, hammer is the hardest test, so in a sense, their project was a bug or two away from working.

Writing back to the regfile when a stall occurs on the cache just before or after needing to write seems to mess up their processor.

The other tests worked fine on board.

When cache bugs make it to product ...

(Testing our financial trading system), we found a case where our software would get a bad calculation. **Once a week or so.**

Eventually, the problem turned out to be a **failure in a CPU cache line refresh.** This was a hardware design fault in the PC.

The test suite included running the code for **two weeks at maximum update rate** without error, so this bug was found.

