

Research Project – CHESS

<http://research.microsoft.com/en-us/projects/CHESS/>

Overview of CHESS

CHESS is a systematic tool to test concurrent systems. In concurrent programs, it is very difficult to test the program thoroughly. Even if we do and find a bug, it is almost impossible to reproduce it. This is due to the fact that a program takes a different path of execution every time, called thread interleaving and there is no way to control that behavior. With CHESS we can.

On finding an error, CHESS reproduces the erroneous interleaving, tremendously improving the debugging experience. CHESS can find assertion violations, deadlocks, livelocks, data-races, and memory-model errors. CHESS includes a visualization tool for viewing thread interleavings for better concurrency debugging.

Milestones achieved this week:

- Downloaded and installed CHESS for Visual Studio 2008
- Searched for the available resources
- Located six technical papers and read one of them
 - **“CHESS: A Systematic Tool for Concurrent Software”** by Madanlal Musuvathi, Shaz Qadeer & Thomas Ball (Nov 2007)