Hardware Transactional Memory and Beyond

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public void LeftEnq(item x) {
    atomic {
        Qnode q = new Qnode(x);
        q.left = left;
        left.right = q;
        left = q;
    }
}

code in block executed “atomically”
Apps, Apps, Apps
High-Level Languages

(actual Haskell code)
A tale of injustice and long-deferred revenge?

Not Exactly.
Just a Passing Fad?
Privatization & Publication?
Basic Language Support
Isolation Levels
Does STM have a Future?
Hybrid TM?
Escape Actions?
Progress?
Too Big
Too Slow
Just Not in the Mood
Distributed TM?
New Architectures?
Accelerators?
Transactions!

Locks!
Transactions! Locks!
The Takeaway?
293,000 Google
109,000 Bing
106,000 Yahoo!
Correctness Properties
Impossibility Results