Distinguished Lecturer Series
Supported by Jeffrey and Holly Ullman

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Ken Birman is Professor of Computer Science at Cornell University. He currently heads the QuickSilver project, which is developing a scalable and robust distributed computing platform. Previously he worked on fault-tolerance, security, and reliable multicast. In 1987 he founded a company, Isis Distributed Systems, which developed robust software solutions for stock exchanges, air traffic control, and factory automation. The author of several books and more than 200 journal and conference papers, Dr. Birman was Editor in Chief of ACM Transactions on Computer Systems from 1993-1998 and is a Fellow of the ACM.

Live Distributed Objects

Although we've been building distributed systems for decades, it remains remarkably difficult to get them right. Distributed software is hard to design and the tools available to developers have lagged far behind the options for building and debugging non-distributed programs targeting desktop environments. At Cornell, we're trying to change this dynamic. The first part of this talk will describe "Live Distributed Objects", a new and remarkably easy way to create distributed applications, with little or no programming required (in fact, the talk will include a demo of how this works). Supporting these kinds of objects forced us to confront a number of scalability, security and performance questions not addressed by prior research on distributed computing platforms. The second part will look at Cornell's Quicksilver system and the approach it uses to solve these problems.

This research is joint with PhD candidate Krzys Ostrowski (the "real" leader on the effort) and with Danny Dolev.

16:00 - 18:00 Tuesday, 08 January 2008
Saal Auditorium in the Alon Building for Hi-Tech (37/202)