CSE 552: Distributed and Parallel Systems
Oral Final Exam
Monday, December 9, 2013

The final exam will consist of a set of oral questions about the technical material in the papers on the reading list. The length will be approximately 15 minutes. The questions may vary from student to student. In general, you will not be able to predict how well you are doing during the exam. Grades will be released sometime on Tuesday, only after everyone has completed the exam. Although the exam is graded, the principal purpose is to help you practice engaging in challenging technical discussions with colleagues.

During the exam, I may from time to time cut off an answer if I am sure you know the material; I may also cut off a line of questions if I am sure you don't know the material. My aim is to as quickly as possible find the frontier of your knowledge and spend the time during the exam exploring that frontier.

Once you have taken the final, please do not discuss the contents or format with **anyone** until the last exam has been taken (approximately 7pm on Monday December 9).

The content of the exam will be drawn from the material in the following papers (a subset of the overall list). You are welcome to introduce other material in your answers; this list is meant to help you focus on the most important material covered in the course.

Jul et al., Fine-Grained Mobility in the Emerald System, ACM TOCS 1988.

Liskov, Distributed Programming in Argus, CACM 1988.

J. Ousterhout, "The Role of Distributed State," CMU Computer Science: A 25th Anniversary Perspective, R. Rashid ed., ACM Press, 1991, pp. 199-217.

Anderson et al., Serverless Network File Systems, SOSP 1995.

Nishtala et al., Scaling Memcache at Facebook, NSDI 2013

Chandy and Lamport. Distributed Snapshots: Determining Global States of Distributed Systems, TOCS 1985.

Lamport, Paxos Made Simple

Liskov, Viewstamped Replication Revisited

Schroeder et al., Experience with Grapevine: The Growth of a Distributed System, TOCS 1984.

Chang et al., BigTable: A Distributed Storage System for Structured Data, TOCS 2008.

Escriva et al., Hyperdex: A Distributed, Searchable Key-Value Store, SIGCOMM 2012

Bolosky et al., The Farsite Project: A retrospective, OSR 2007

Power and Li. Piccolo: Building Fast, Distributed Programs with Partitioned Tables, OSDI 2010.

DeCandia et al., Dynamo: Amazon's Highly Available Key-Value Store, SOSP 2007.

Corbett et al., Spanner: Google's Globally Distributed Database, OSDI 2012.

Terry et al., Managing Update Conflicts in Bayou, a Weakly Connected Replicated Storage System, SOSP 1995

Hindman et al., Mesos: A Platform for Fine-Grained Resource Sharing in the Data Center, NSDI 2011.

Burrows et al., A Logic of Authentication, ACM TOCS, 1990.

Lampson, Practical Principles for Computer Security, 2006