What and Why is an LSQ?

• What
  – Queue: program order
  – CAM: Content-addressable memory

• Why?
  – Reconcile memory dependencies
  – Store <blank>; Load X; blah… and then
  – Store X, D; Load X; blah…

• How
  – Loads can search for conflicts
  – Store can trigger a load
Segmentation allows…

- Simultaneous access
- Larger for same cycle time
- Not significant locality*
- If larger != faster overall then it wasn’t the problem