Locking in the Multithreaded FreeBSD Kernel

John Baldwin
<jhb@FreeBSD.org>

Introduction

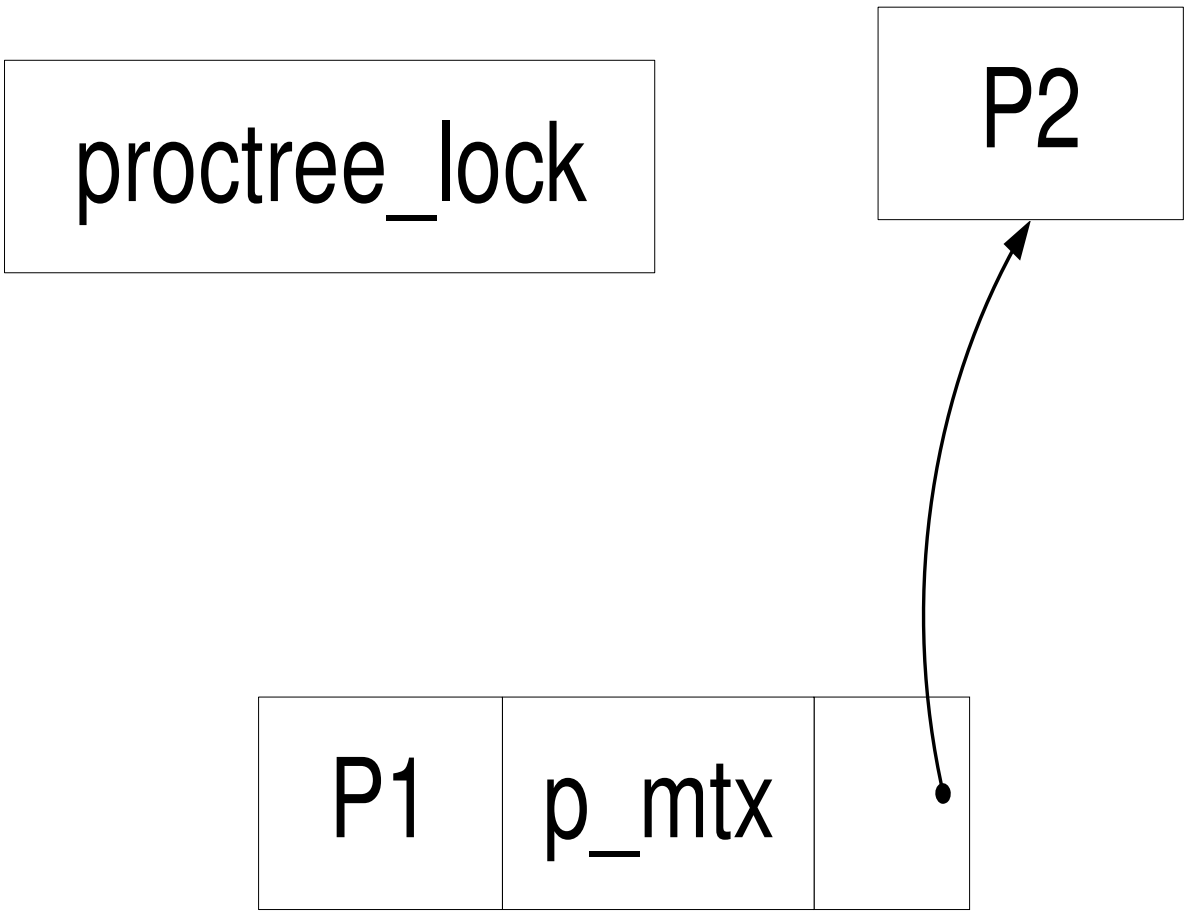
- What is SMPng?
- Current Status
- Guidelines
- Tools

Lock Reads and Writes

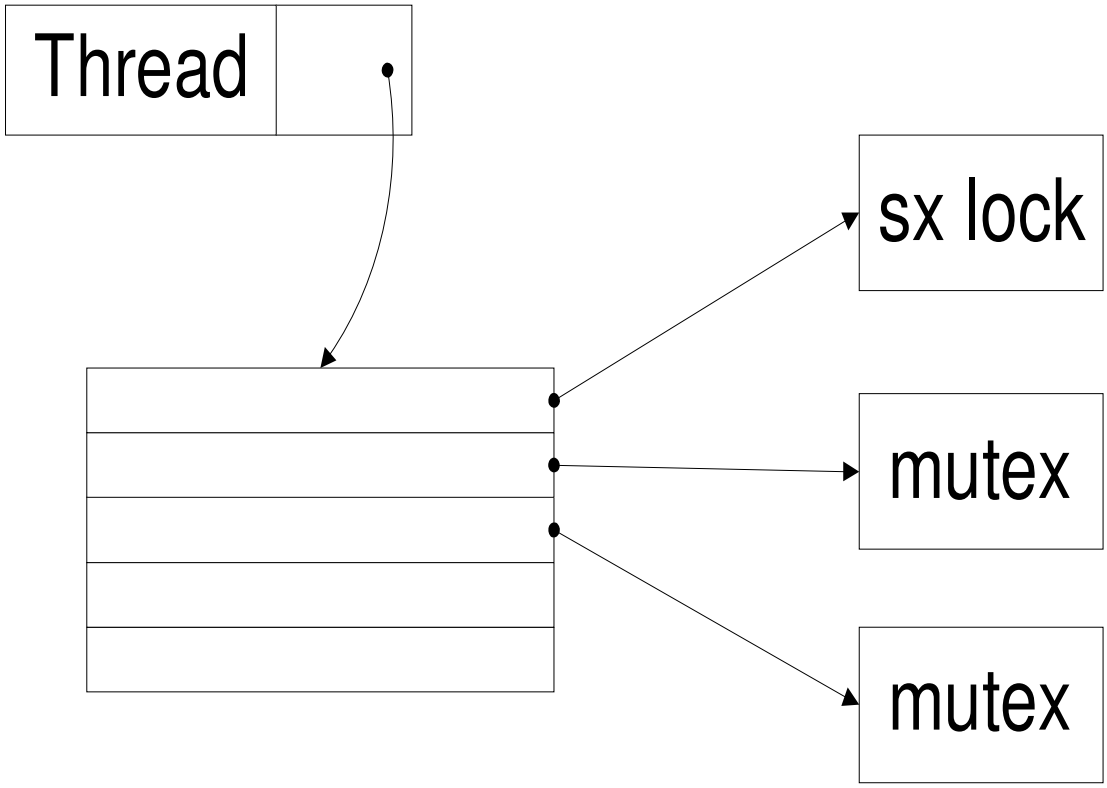
- Unlocked Reads can Read Stale Data

- Read Locks are not as Strong as Write Locks

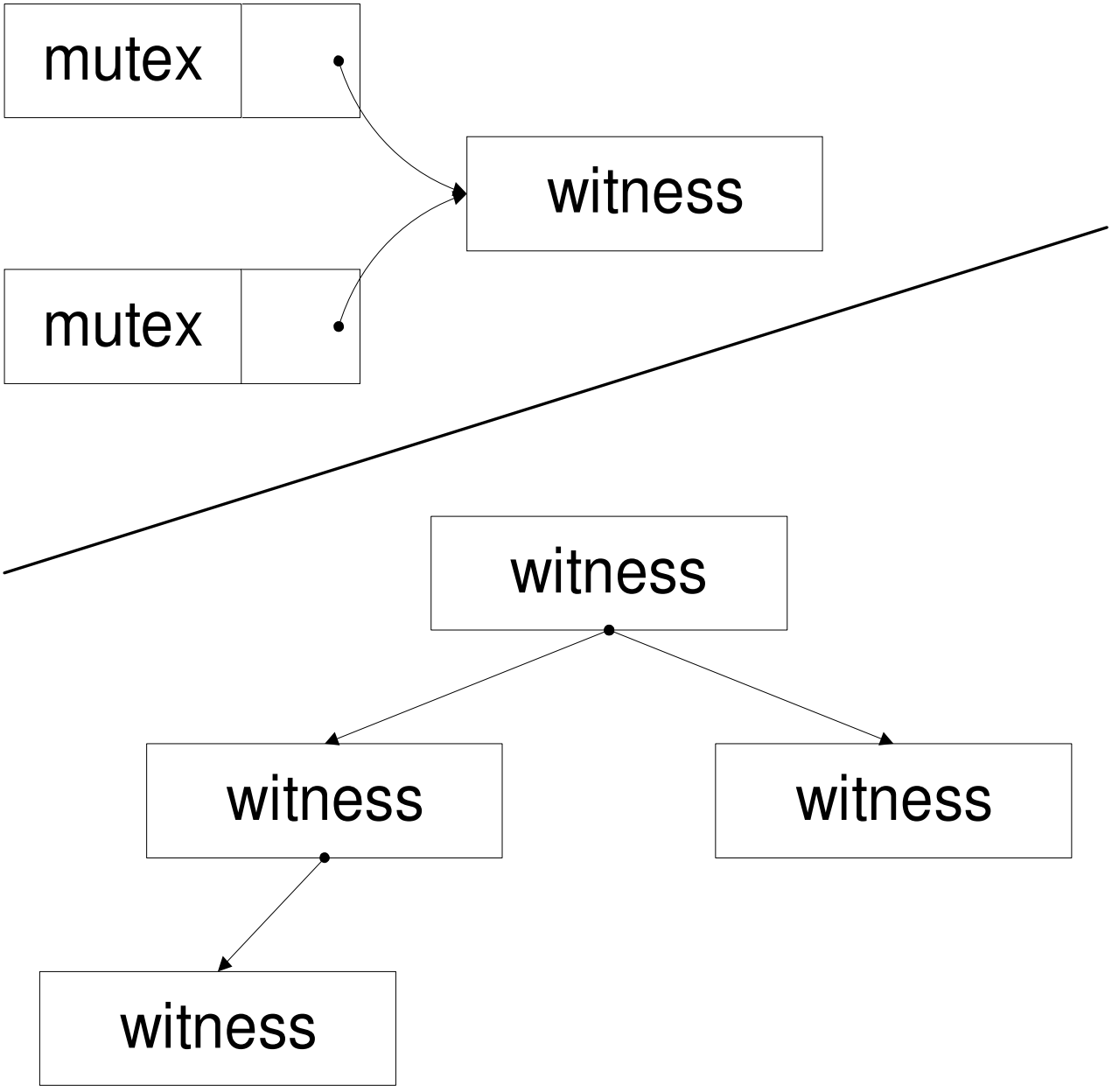
Dual Locks for p_pptr



Witness Thread State



Witness Lock Hierarchy



Conclusion

- Much Work to be Done
- Ask Questions on
  <smp@FreeBSD.org>
- Project Status at
  http://www.FreeBSD.org/smp