

μ Kernels vs Dual Kernels

Advanced Operating Systems

Luca Abeni

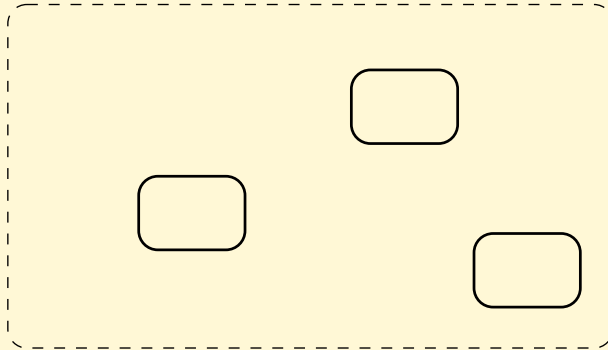
luca.abeni@santannapisa.it

Using HLP

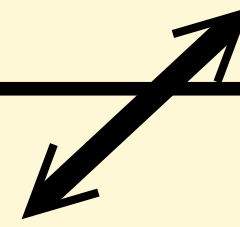
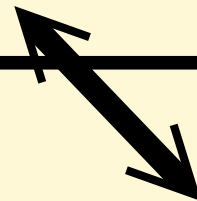
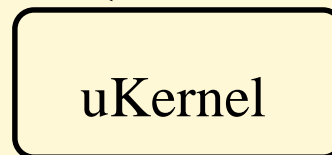
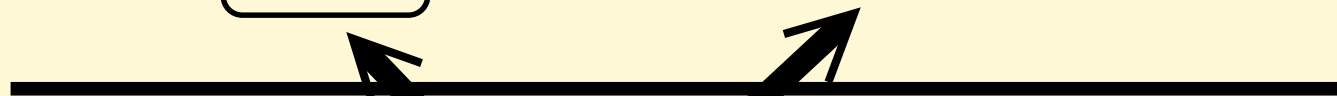
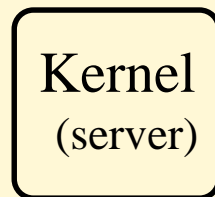
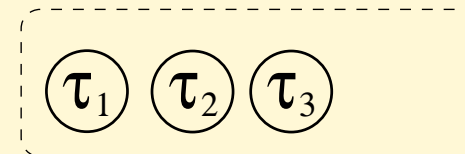
- Both the μ kernel and the dual kernel approach are based on using the Highest Locking Priority protocol to reduce latency
 - Strong distinction between real-time tasks and non real-time tasks
 - Real-time tasks cannot use kernel functionalities!!!
- In μ kernel systems, real-time tasks execute in user space
- In dual kernel systems, real-time tasks are kernel modules (based on a small real-time executive!)

μ Kernel-Based System

Non Real-Time Applications



Real-Time Applications



Dual Kernel System

