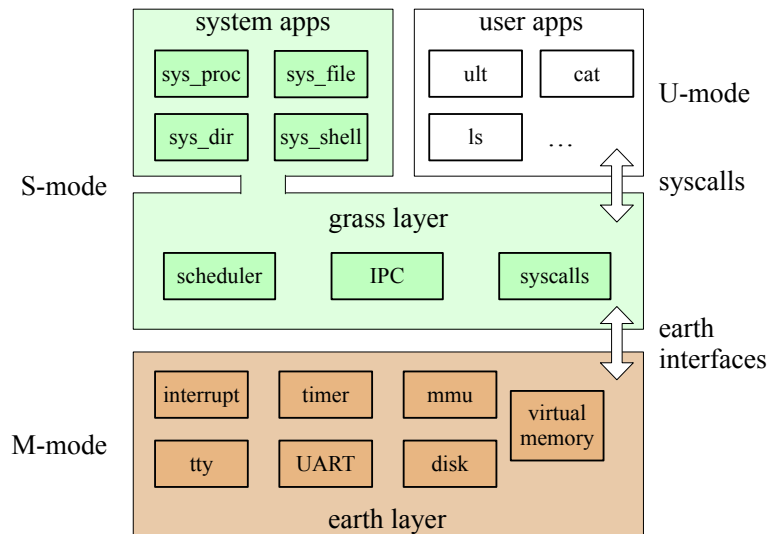


OSI Handout Week 5

## 1. egos architecture



## 2. egos-2k+ (sifive\_e) booting process

```

1  ----- Simulate on QEMU-RISCV -----
2  cp build/release/earth.elf tools/qemu/qemu.elf
3  riscv64-unknown-elf-objcopy --update-section
   .image=tools/disk.img tools/qemu/qemu.elf
4  qemu-system-riscv32 -bios none -readconfig
   tools/qemu/sifive-e31.cfg -kernel tools/qemu/qemu.elf -nographic
5  [CRITICAL] ----- Booting -----
6  [SUCCESS] Finished initializing the tty device
7  [INFO] Use direct mode and put the address of trap_entry() to mtvec
8  [SUCCESS] Finished initializing the CPU interrupts_
9  [SUCCESS] Finished initializing the timer function
10 [SUCCESS] Finished initializing the disk device
11 [SUCCESS] Finished initializing the CPU memory management unit
12 [INFO] Grass kernel file size: 0x00002708 bytes
13 [INFO] Grass kernel memory size: 0x00002c90 bytes
14 [CRITICAL] Enter the grass layer
15 [INFO] Load kernel process #1: sys_proc
16 [INFO] App file size: 0x00001330 bytes
17 [INFO] App memory size: 0x00001740 bytes
18 [SUCCESS] Enter kernel process GPID_PROCESS
19 [INFO] Load kernel process #2: sys_file
20 [INFO] App file size: 0x000027c0 bytes
21 [INFO] App memory size: 0x00002814 bytes
22 [SUCCESS] Enter kernel process GPID_FILE
23 [INFO] sys_proc receives: Finish GPID_FILE initialization
24 [INFO] Load kernel process #3: sys_dir
25 [INFO] App file size: 0x00000fb4 bytes
26 [INFO] App memory size: 0x000013bc bytes
27 [SUCCESS] Enter kernel process GPID_DIR
28 [INFO] sys_proc receives: Finish GPID_DIR initialization
29 [INFO] Load kernel process #4: sys_shell
30 [INFO] App file size: 0x000006e0 bytes
31 [INFO] App memory size: 0x000006e0 bytes
32 [CRITICAL] Welcome to the egos-2k+ shell!
33 [INFO] proc 5 finished after 0 yields, turnaround time: 0.00,
   response time: 0.00, cputime: 0.00
34 → /home/cs6640 %

```

