

# Variety is a challenge

## ● Problem : there are many devices and each has its own protocol

- Some devices are accessed by I/O ports or memory mapping or both
- Some devices can interact by polling or interrupt or both
- Some device can transfer data by programmed I/O or DMA or both

## ✓ Solution : abstraction

- Build a common interface
- Write device driver for each device

➡ Drivers are 70% of Linux source code

# File System Abstraction

- File system specifics of which disk class it is using  
It issues block read and write request to the generic block layer

