

Lecture 9: Extern Mem, I/O

- Discussion topics
- New ideas welcome!

Slide 8: HDD access time

- Disk spinning speed: 7200 rpm
 - Rot. time: $1/7200 \text{ min} = 1/120 \text{ s} = 8.33 \text{ ms}$
- Aver. Seek time (r/w head moves): 10 ms
- Sectors per track: 500
- What is the average sector access time?

??? ms

- How could make the average sector access time smaller?

Slide 15: I/O

- What advantage does Interrupt Driven I/O have as compared to Programmed I/O?
- What advantage does Programmed I/O have as compared to Interrupt Driven I/O?
- What advantage does DMA I/O have as compared to Interrupt Driven I/O?
- How does DMA I/O disturb the execution of other programs?