

CSE 550: Systems for all

Au 2022

Ratul Mahajan

Two catalysts for new systems

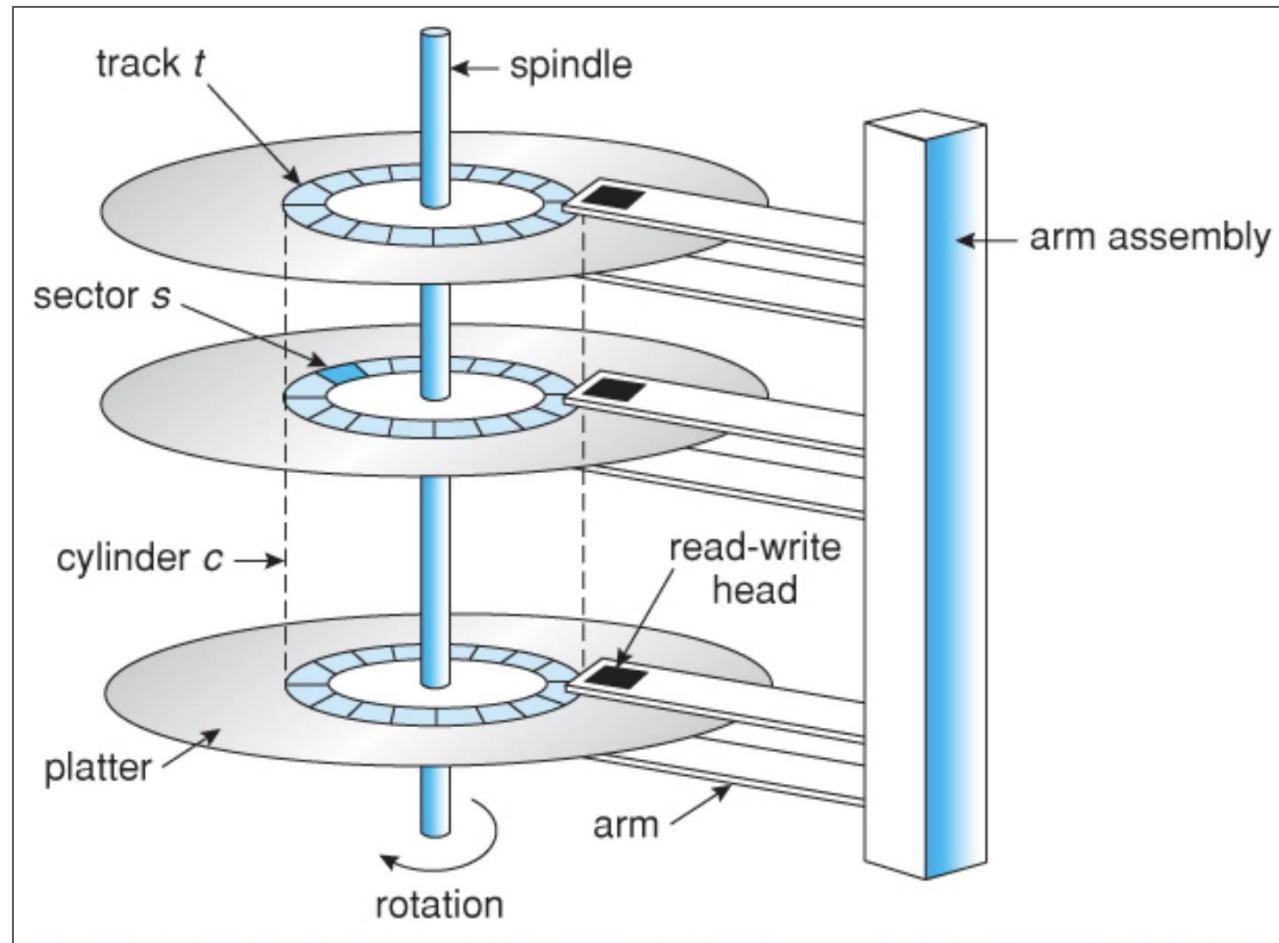
Changing technology (trends)

- New technology that changes fundamental assumptions (e.g., NVM)
- Moving bottlenecks (e.g., memory IO)

New workloads

- Global file search → DHTs
- Sensors → Stream processing
- ML → Tensorflow, PyTorch
- ...

Hard drives



Let's build a file system!

Other types of data / organization

Key-value stores

Structured data

Timeseries data

GIS data

...

Other types of media

Tape

Optical

Flash/SSD

DNA

...

Over to Jiacheng and Matthew