BFQ
The Budget Fair Queuing
I/O Scheduler

A Helicopter View
USER EXPERIENCE

There's nothing I hate in the world like waitin'
And there're things in life I'd hate to be late in
Yeah, I look at my watch and I look at my wrist
And then I punch myself in the face with my fist

(D.A.D. Smart Boy Can’t Tell Ya)
AARGH!
WHAT IS A BLOCK LAYER?

/dev/sda
/dev/sda1
/dev/mmcblk0
/dev/mmcblk0p1

Can you eat it?
BLOCK SCHEDULING POLICY

PLEASE LOAD.
WAITING ...
CFQ and its Heuristics

P1  P2  P3  P4  ...  Pn
Q1  Q2  Q3  Q4  Qn
/dev/sda1
BFQ and its Heuristics

P1  P2  P3  P4  ...  Pn
Q1  Q2  Q3  Q4  ...  Qn
/dev/sda1
LINARO APPROACH TO BFQ

Science:

1. First team: detail findings, propose solution
2. Second team: reproduce findings, verify solution
3. Change of paradigm/code
FUTURE CONCEPTS: MULTQUEUE
FUTURE CONCEPTS

Write-induced latencies (AARGH!)