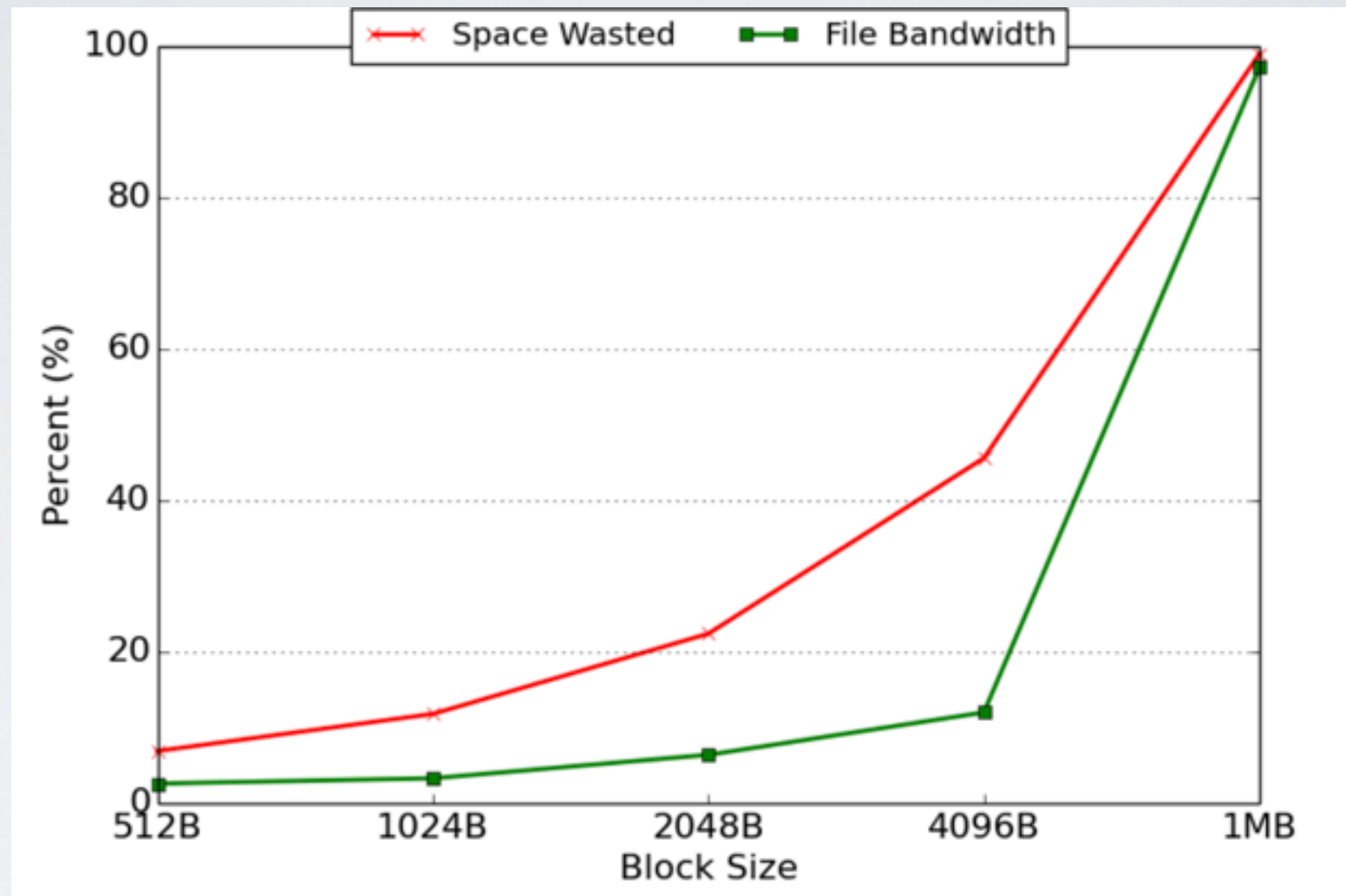
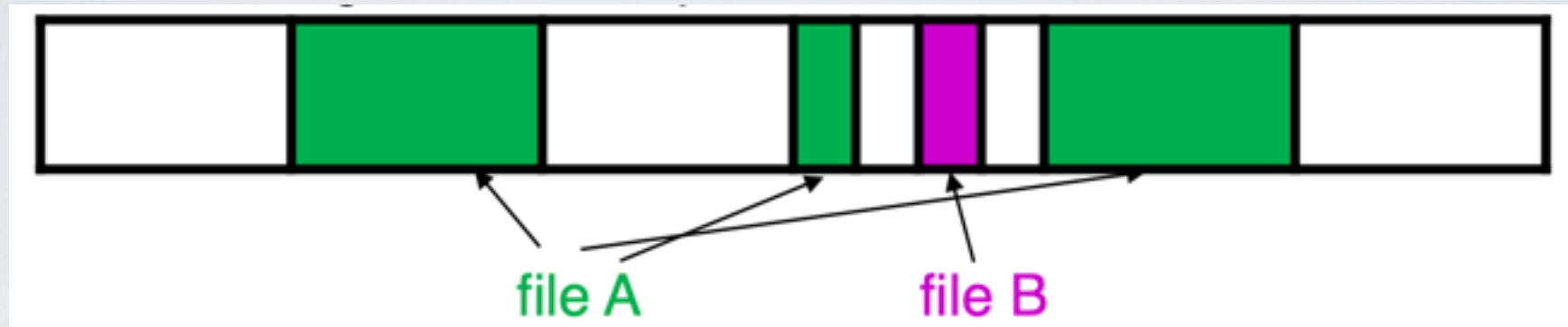


# Problem 1 - blocks are too small



- ✓ Bigger block increases bandwidth
- ⦿ but increases internal fragmentation as well

## Solution - use fragments



BSD FFS has large block size (4096B or 8192B)

- ➔ Allow large blocks to be chopped into small ones called "fragments"
  - Ensure fragments only used for little files or ends of files
  - Fragment size specified at the time that the file system is created
  - Limit number of fragments per block to 2, 4, or 8
- ✓ High transfer speed for larger files
- ✓ Low wasted space for small files or ends of files