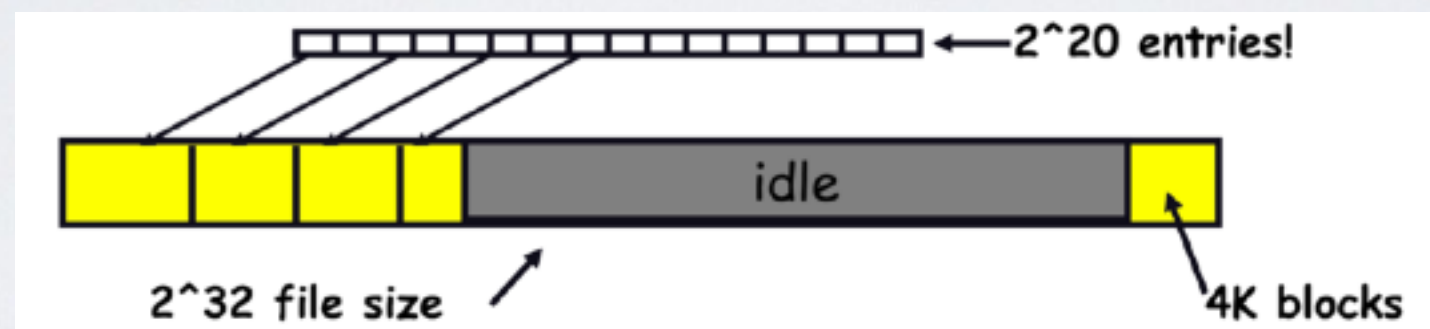# More issues with indexed Files

Large file size with lots of unused entries means

◉ The mapping table requires large chunk of contiguous space

➡ Solution : mapping table structured as a multi-level index array

◉ but ... you know the story (similar to VM two-level page lookup)

Multi-level indexed files : Unix File System

- First 12 pointers are direct blocks
  solve problem of first blocks access slow

- Then single, double, and triple indirect block pointers