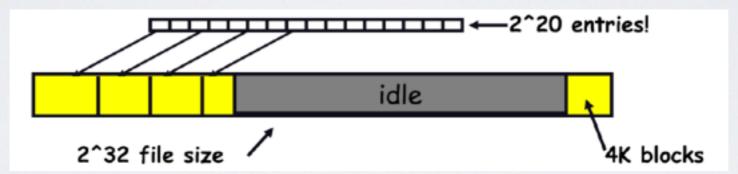
## More issues with indexed Files

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

