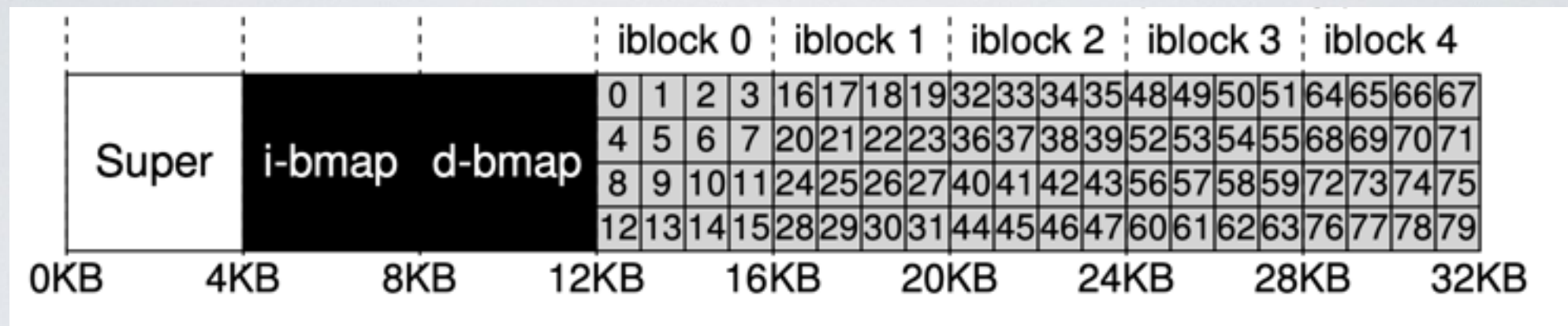


# The Inode Table



- **Physical Disk capacity in our example** (64 blocks of 4KB each)  
 $4 \times 64 = 256 \text{ KB}$
- **Logical capacity (8 blocks are reserved)**  
 $4 \times 56 = 224 \text{ KB}$  (the actual data storage space)
- **Maximum number of inodes** (each inode is 256 bytes)  
 $(5 * 4 * 1024) / 256 = 80 \text{ inodes}$  (i.e max number of files)
- **Size of the inode bitmap** (1 bit per inode)  
 $1 \times 80 \text{ inodes} = 80 \text{ bits}$  (out of 32K bits)
- **Size of the data bitmap** (1 bit per storage block)  
 $1 \text{ bit} \times 56 \text{ blocks} = 56 \text{ bits}$  (out of 32K bits, max data storage 128 MB)

# Unix Inode (simplified)

Size	Name	Description
2	mode	can the file be read/written/executed
2	uid	file owner id
4	size	the file size in bytes
4	time	time the file was last accessed
4	ctime	time when the file created
4	mtime	time when the file was last modified
4	dtime	time when the inode was deleted
2	gid	file group owner id
2	links_count	number of hard links pointing to this file
4	blocks	the number of blocks allocated to this file
60	block	disk pointers (15 in total)
4	file_acl	ACL permissions
4	dir_acl	ACL permissions