

MC504/MC514 - Sistemas Operacionais

Sistemas de Arquivos (Parte II)

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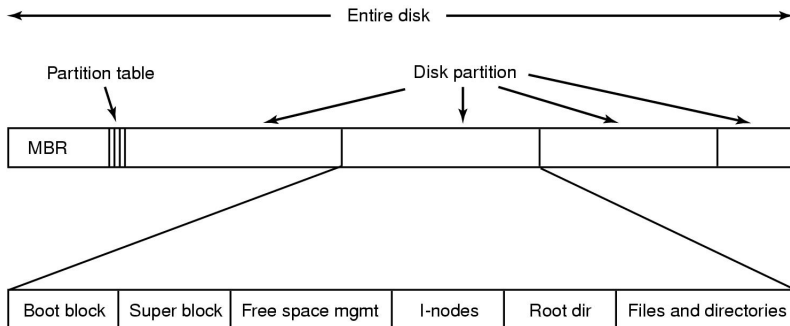
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- 1 Introdução
- 2 Armazenamento de Arquivos
- 3 Diretórios
- 4 Arquivos compartilhados
- 5 Gerência espaço livre
- 6 Consistência

Questões de Implementação

- Como os arquivos são armazenados
- Como o espaço livre é gerenciado
- Eficiência
- Confiabilidade

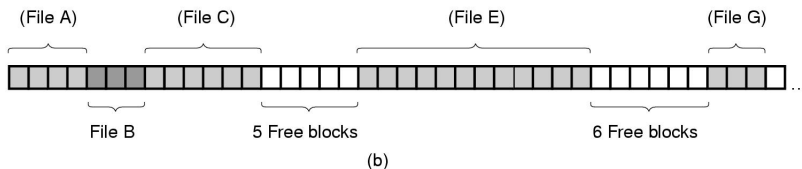
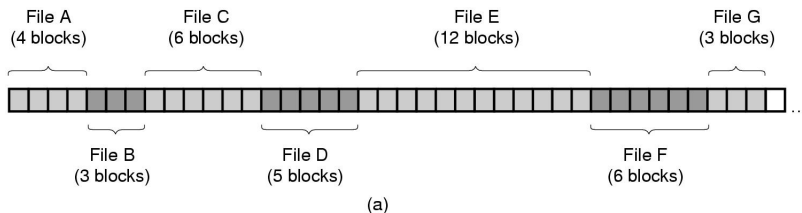
Layout



Tanenbaum: Figura 6.11

- MBR (Master Boot Record)
- Tabela de partições
- Boot block

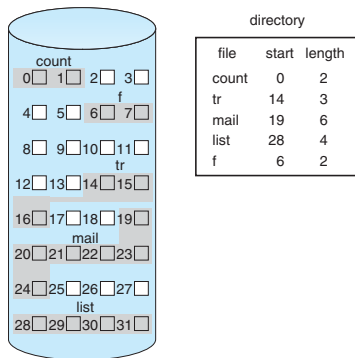
Alocação contínua



Tanenbaum: Figura 6.12

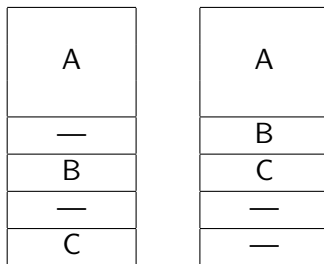
Alocação contínua

Fragmentação externa



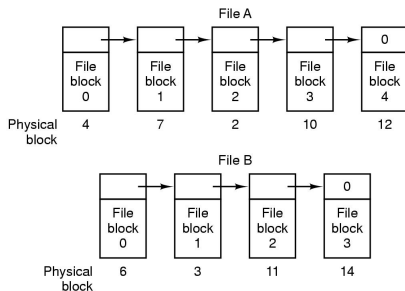
Silberschatz: Figura 12.05

Compactação do disco

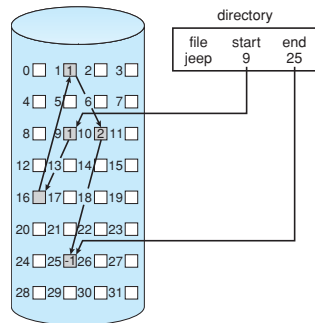


Quais são as desvantagens de se utilizar este método?

Lista ligada de blocos

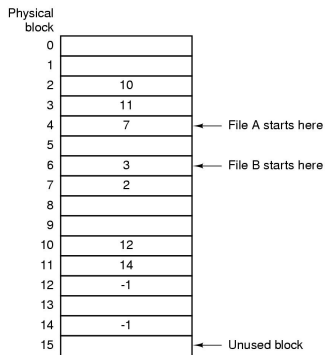


Tanenbaum: Figura 6.13

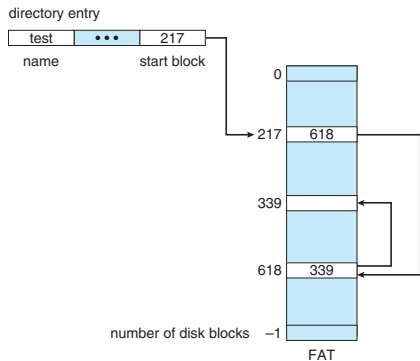


Silberschatz: Figura 12.06

File Allocation Table (FAT)

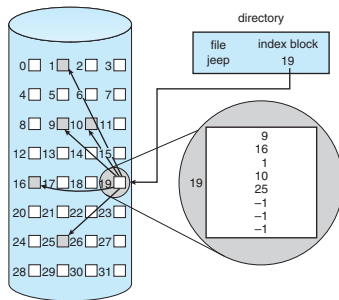


Tanenbaum: Figura 6.14



Silberschatz: Figura 12.07

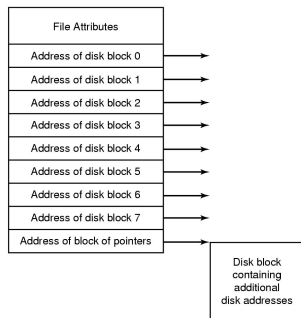
Index blocks



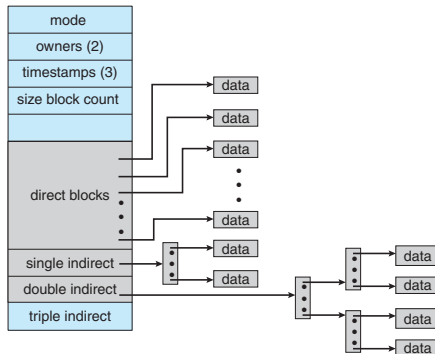
Silberschatz: Figura 12.08

Quais são as vantagens e desvantagens deste esquema em comparação à FAT?

I-node

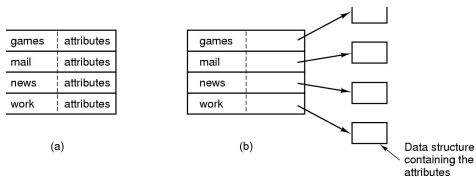


Tanenbaum: Figura 6.15



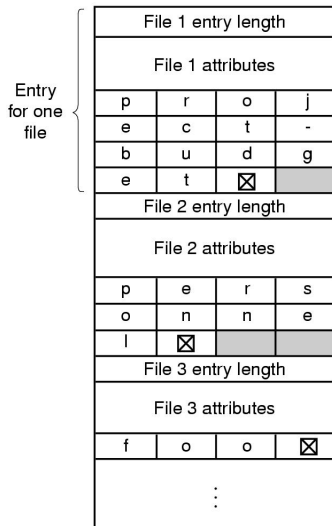
Silberschatz: Figura 12.09

Implementação de diretórios

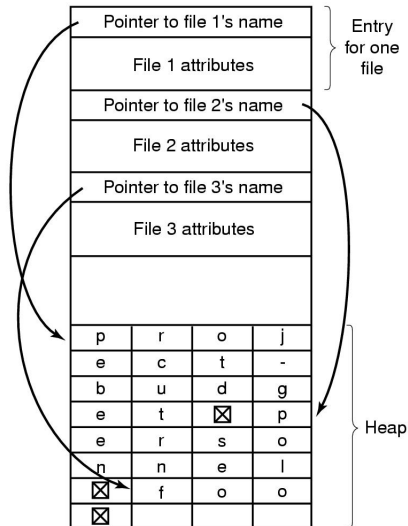


Tanenbaum: Figura 6.16

Nomes de tamanho variável

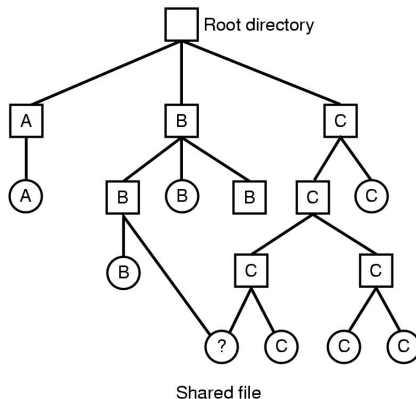


(a)



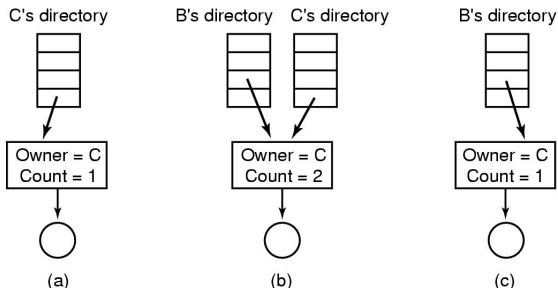
(b)

Arquivos compartilhados



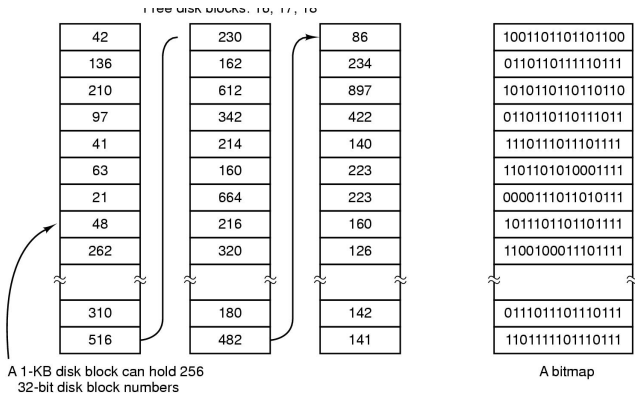
Tanenbaum: Figura 6.18

Arquivos compartilhados



Tanenbaum: Figura 6.19

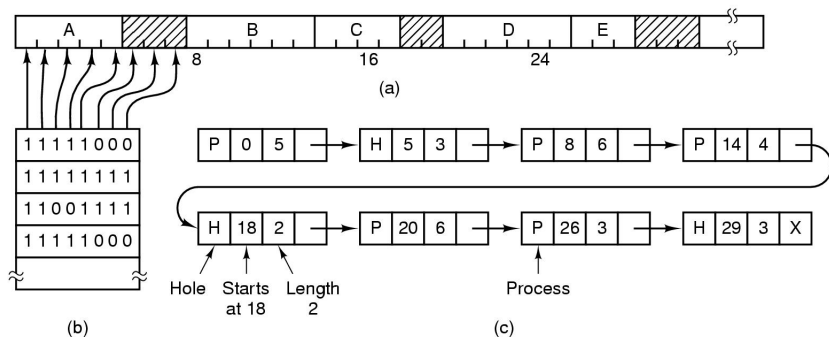
Lista de livres e bitmaps



Tanenbaum: Figura 6.21

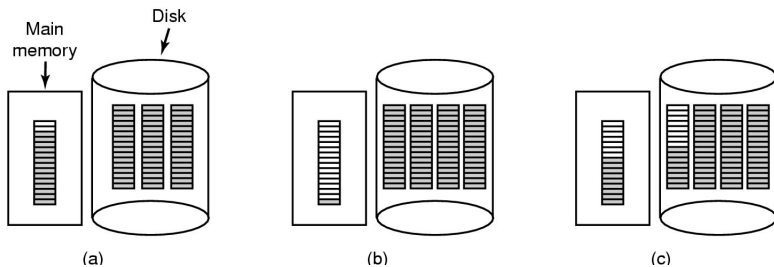
Bitmaps e lista de livres

Relembrando gerência de memória...



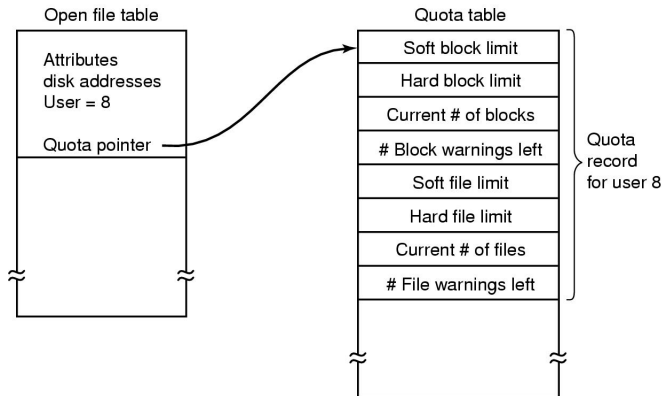
Tanenbaum: Figura 4.7

Lista de livres em memória



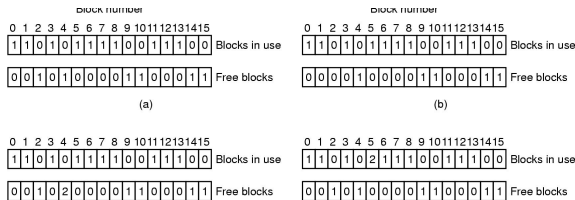
Tanenbaum: Figura 6.22

Gerência de quotas



Tanenbaum: Figura 6.23

Consistência do sistema de arquivos



Tanenbaum: Figura 6.26

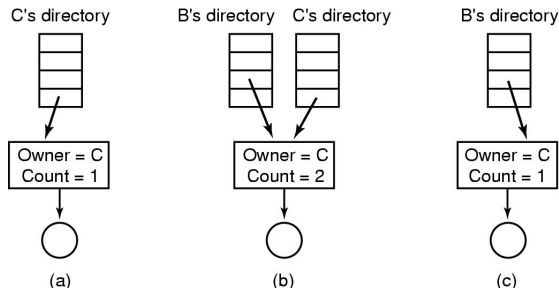
(a) consistente

(b) bloco faltando

(c) duplicação na
lista de livres

(d) duplicação nos
dados

Consistência do sistema de arquivos



Tanenbaum: Figura 6.19

Verificar se todos os contadores estão corretos