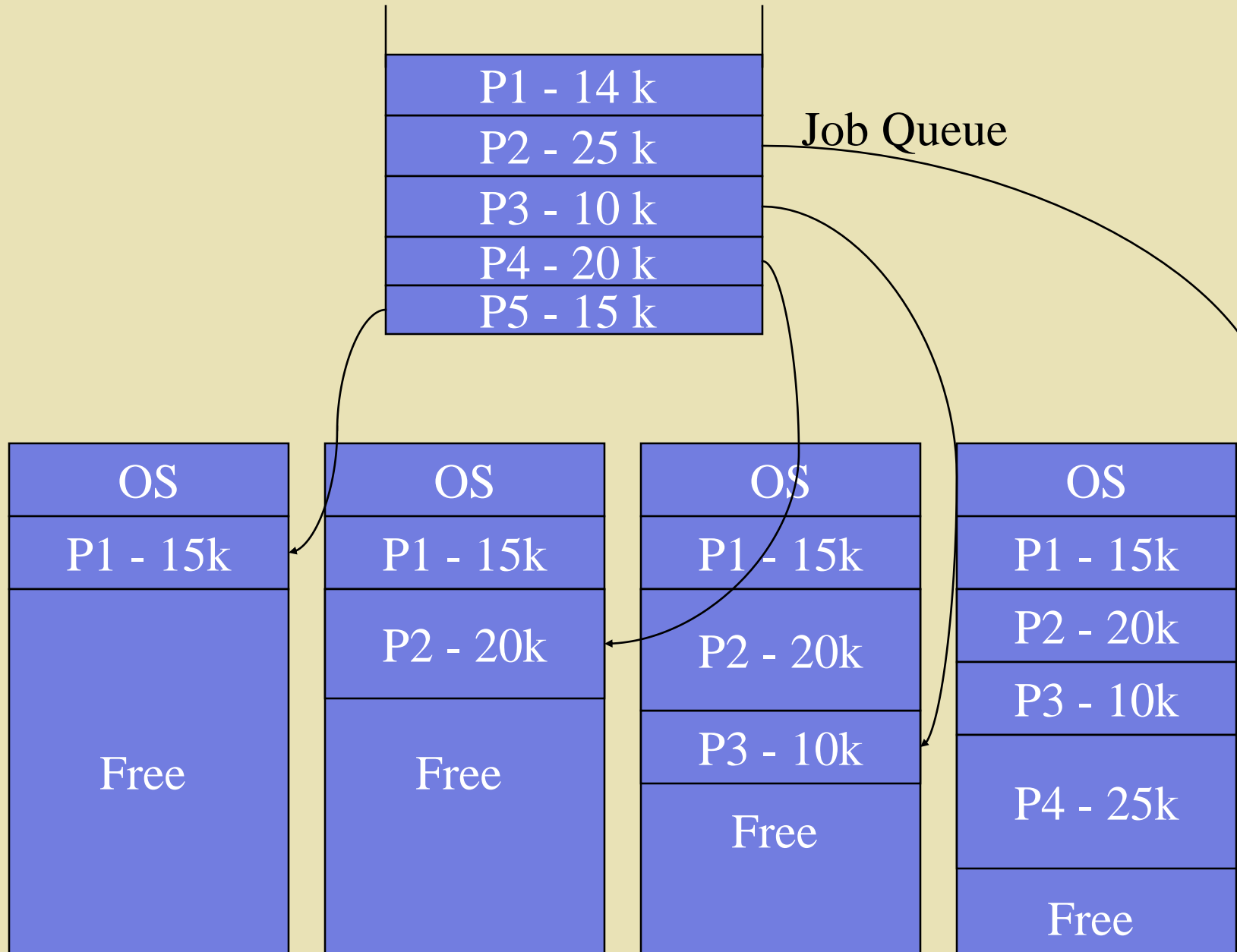



A collection of historical artifacts is arranged on a light-colored, textured surface. In the top left, a portion of a wooden chessboard with a checkered pattern and several chess pieces is visible. Below the chessboard, there are two ornate medals. The top medal features a red ribbon with a circular rosette. The bottom medal has a blue ribbon with a circular rosette. To the right of the medals, a pair of round-rimmed spectacles with thin metal frames and a small bridge is lying. In the bottom left corner, a small, round, silver-colored compass with a white face and black markings is visible. The text "Variable Partition Multi Programming" is overlaid on the right side of the image in a large, dark, serif font.

Variable Partition Multi Programming

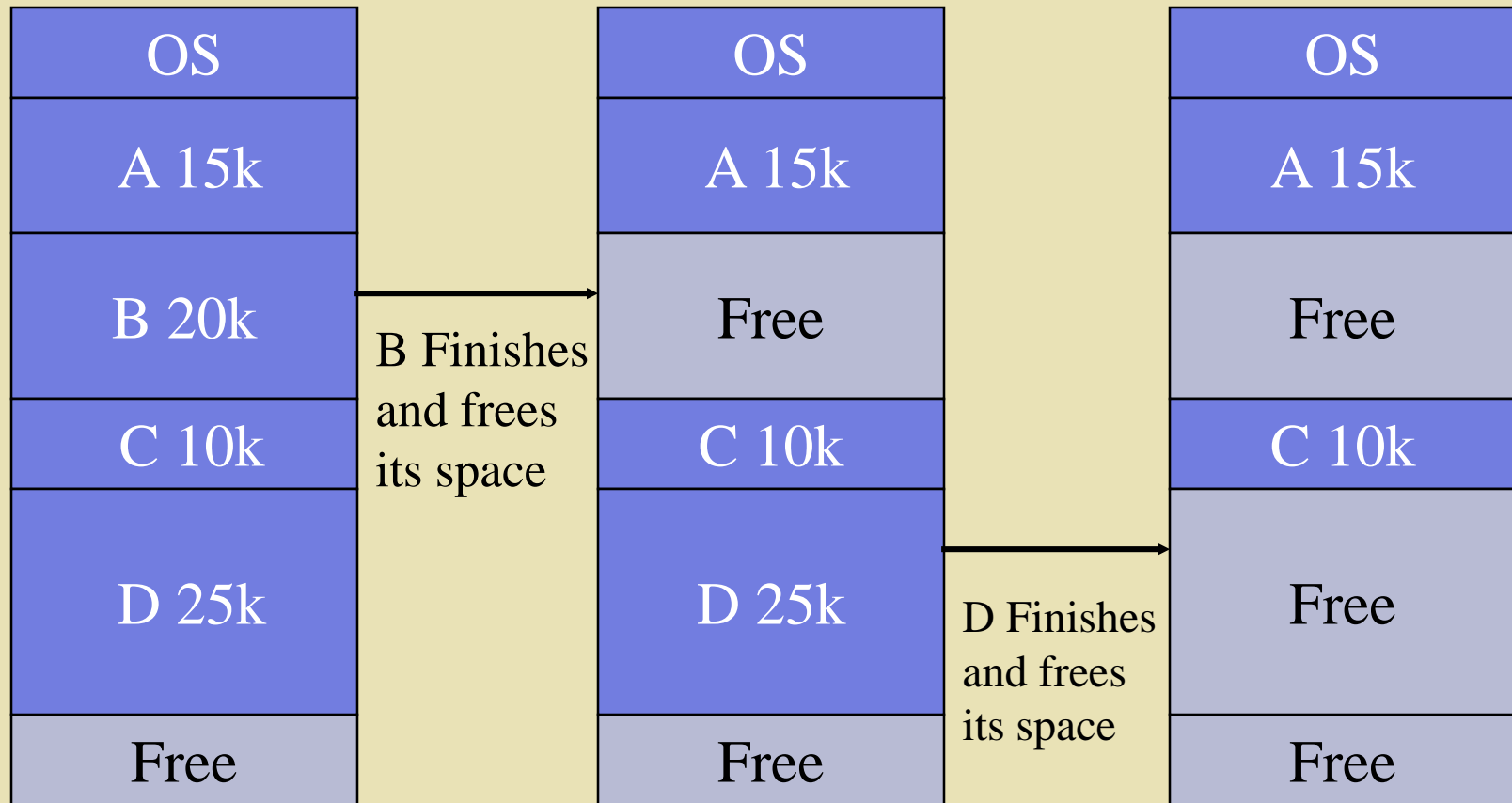




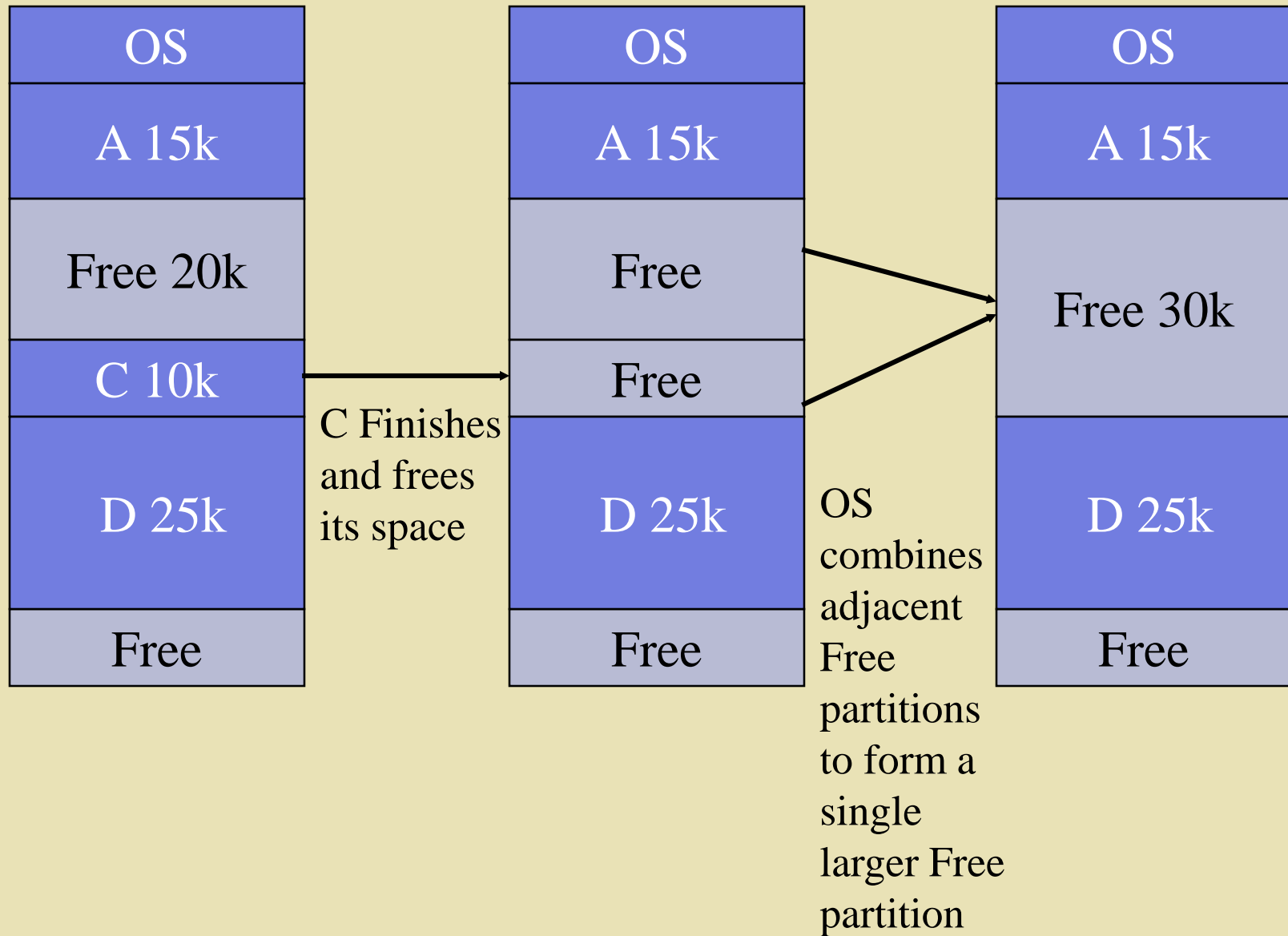
Variable Partition Multiprogramming

- ◆ No fixed boundaries are assigned for a job.
- ◆ A job must occupy adjacent storage locations.
- ◆ There is no internal fragmentation – a job's partition is exactly the size of the job.
- ◆ External fragmentation can occur if the space is not enough to hold an incoming job.

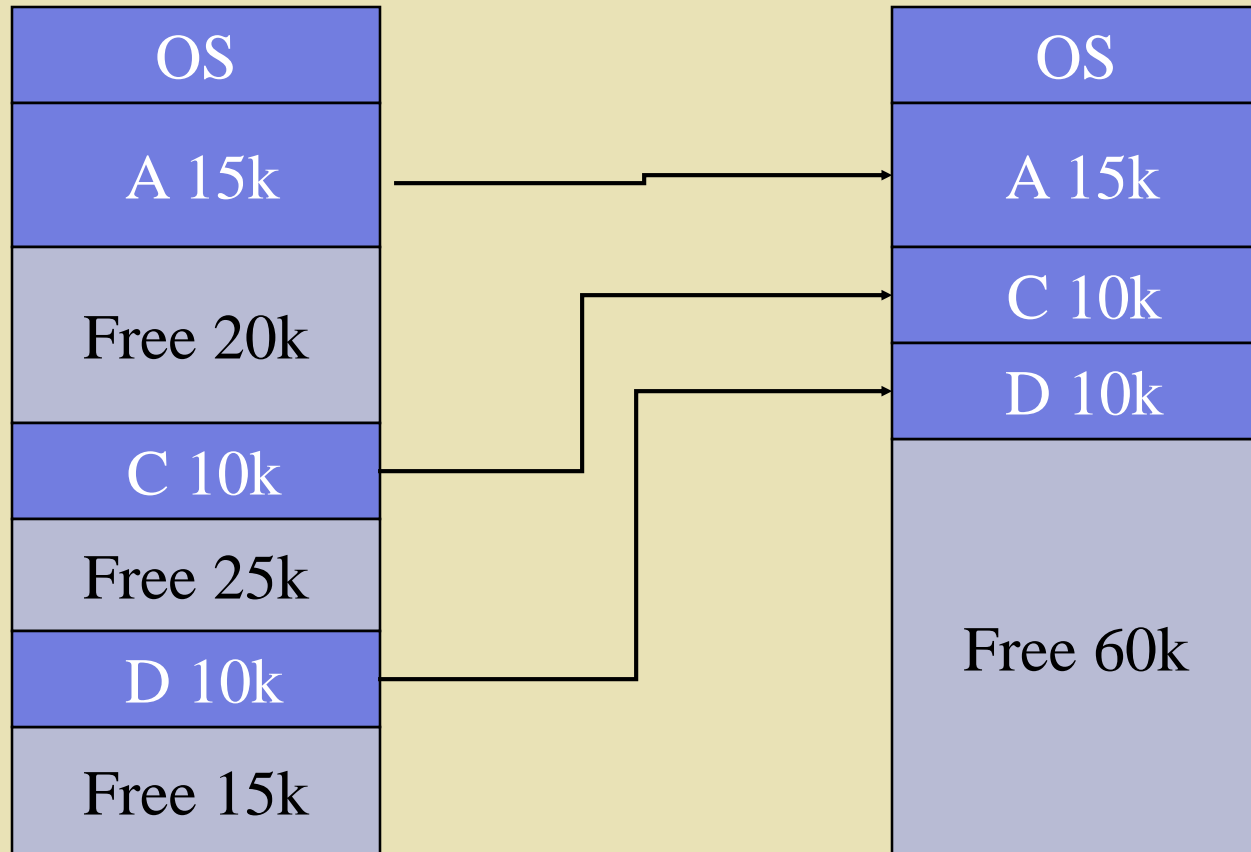
Storage holes in variable partition multiprogramming





Coalescing



Storage Compaction



- 
- ◆ The process of merging adjacent free partitions to form a single larger partition is called *coalescing*.
 - ◆ *Storage Compaction* involves moving all occupied memory partitions to one end of the memory. This leaves a single large free storage partition instead of the numerous small partitions.



◆ *Drawbacks of Compaction*

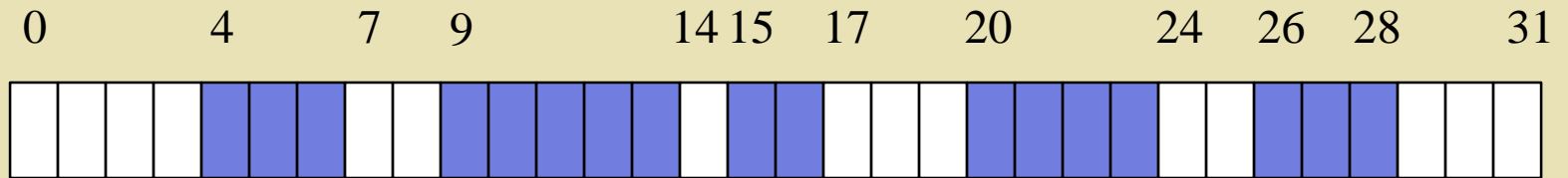
- It consumes system resources that could otherwise be used productively.
- The system must stop everything while it performs the compaction.
- Compaction involves relocating the jobs that are in storage.



Allocation Algorithms

- ◆ Not practical to keep PDT.
- ◆ Two methods
 - Bit Map
 - Linked List

Memory Bit Map



00001110

01111101

10001111

00111000

Bit Map

Linked List

