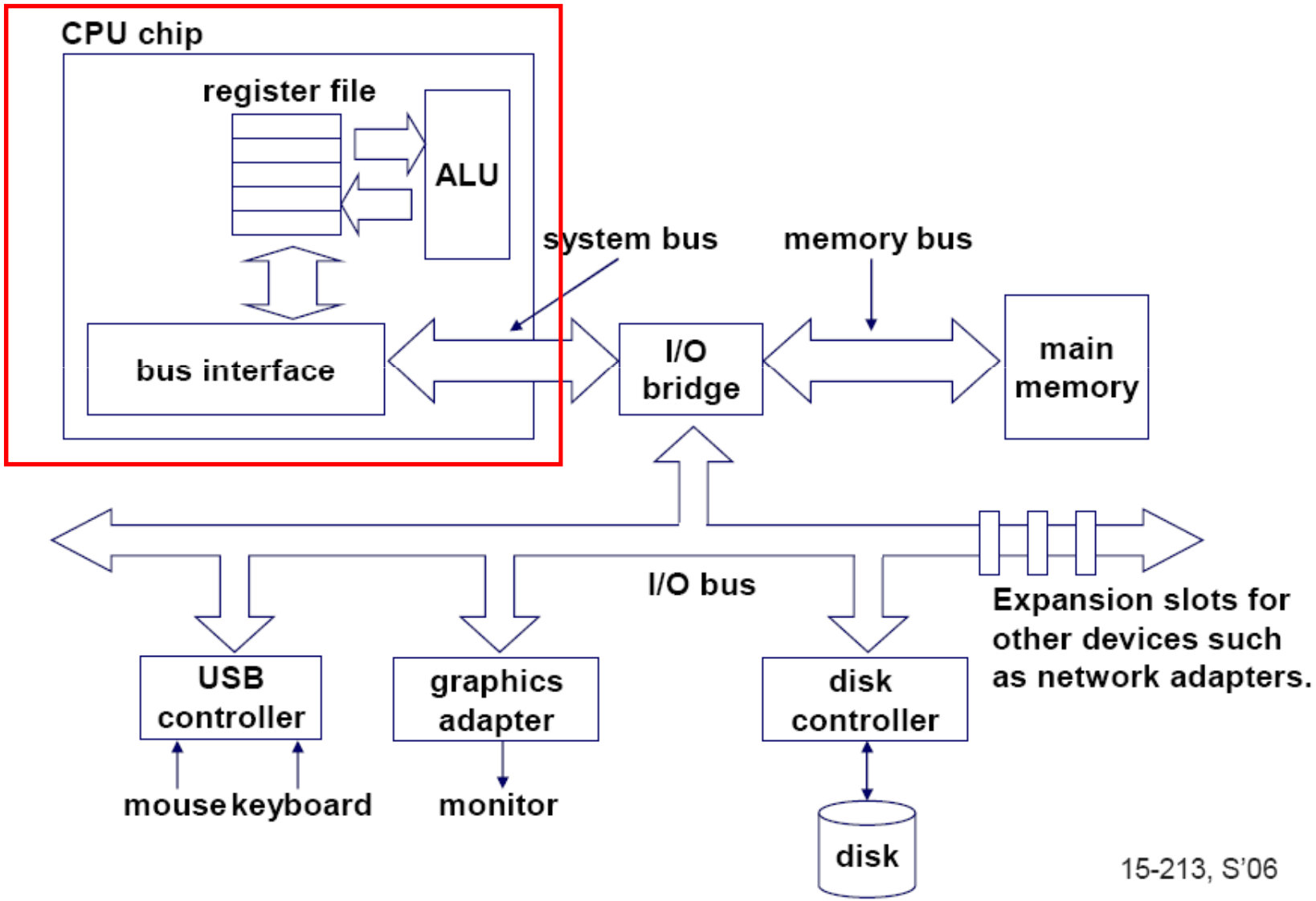
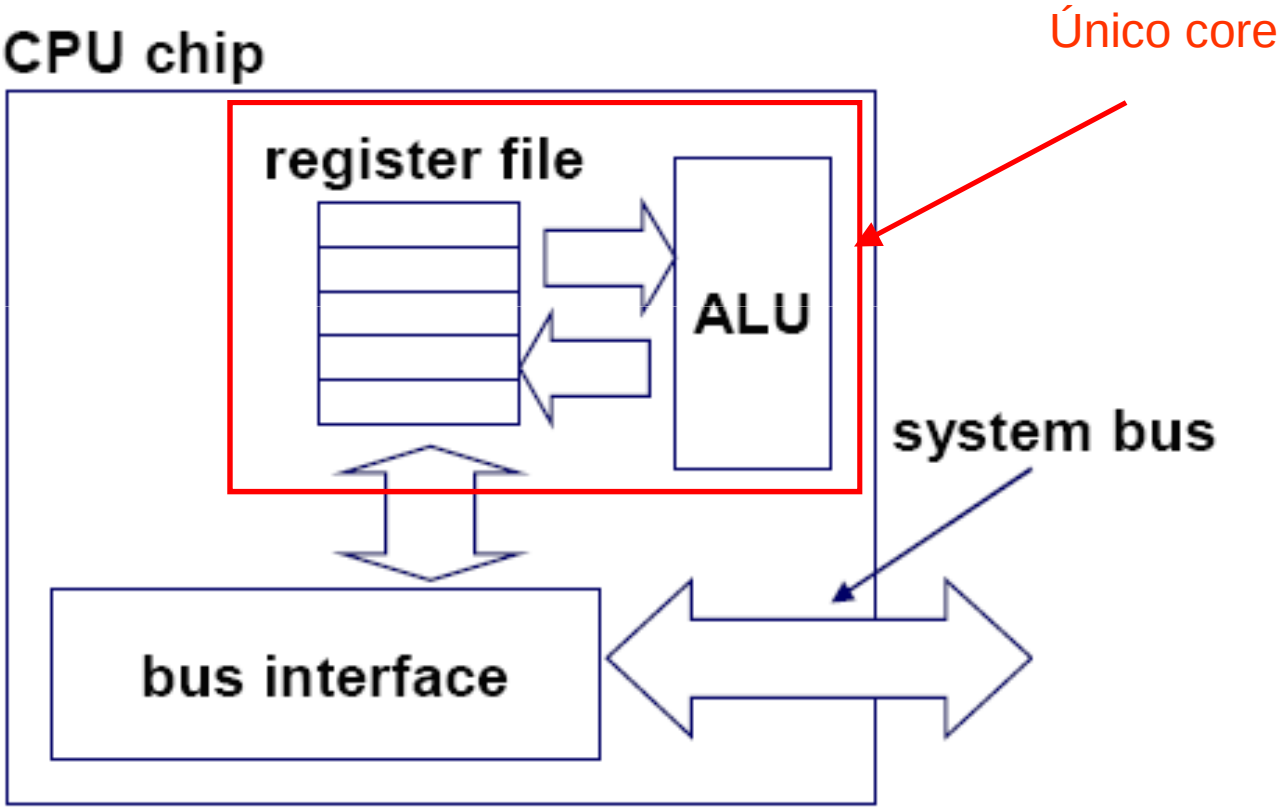
ARQUITETURAS MULTICORE

INF005

Computador Single Core

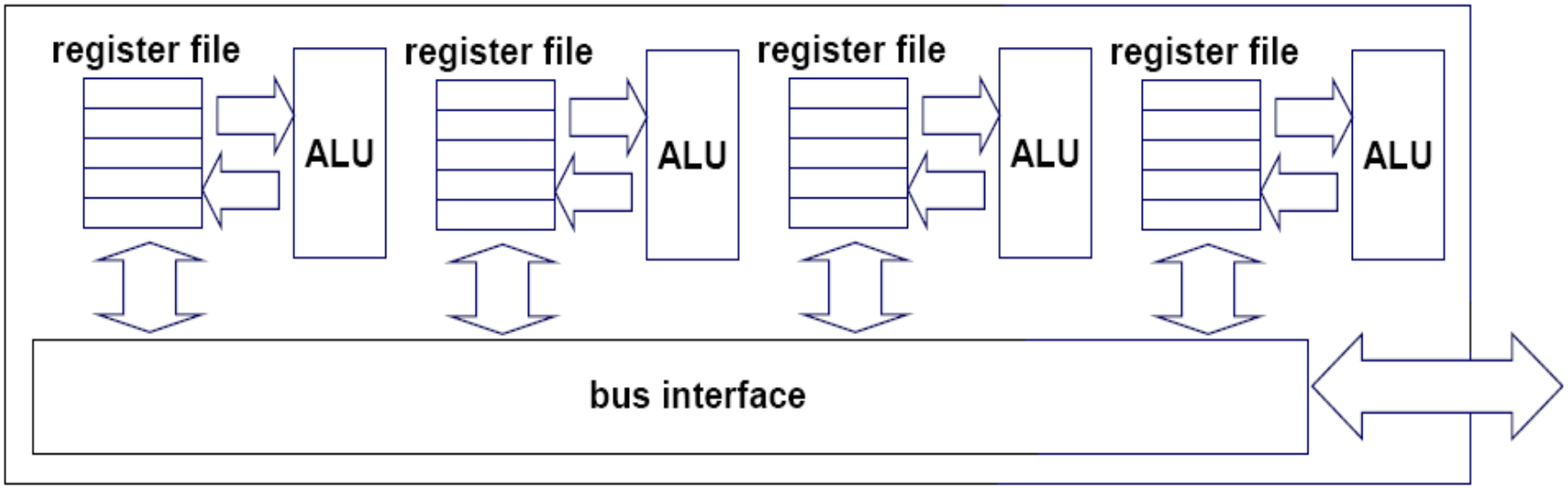


Único e Múltiplos Core



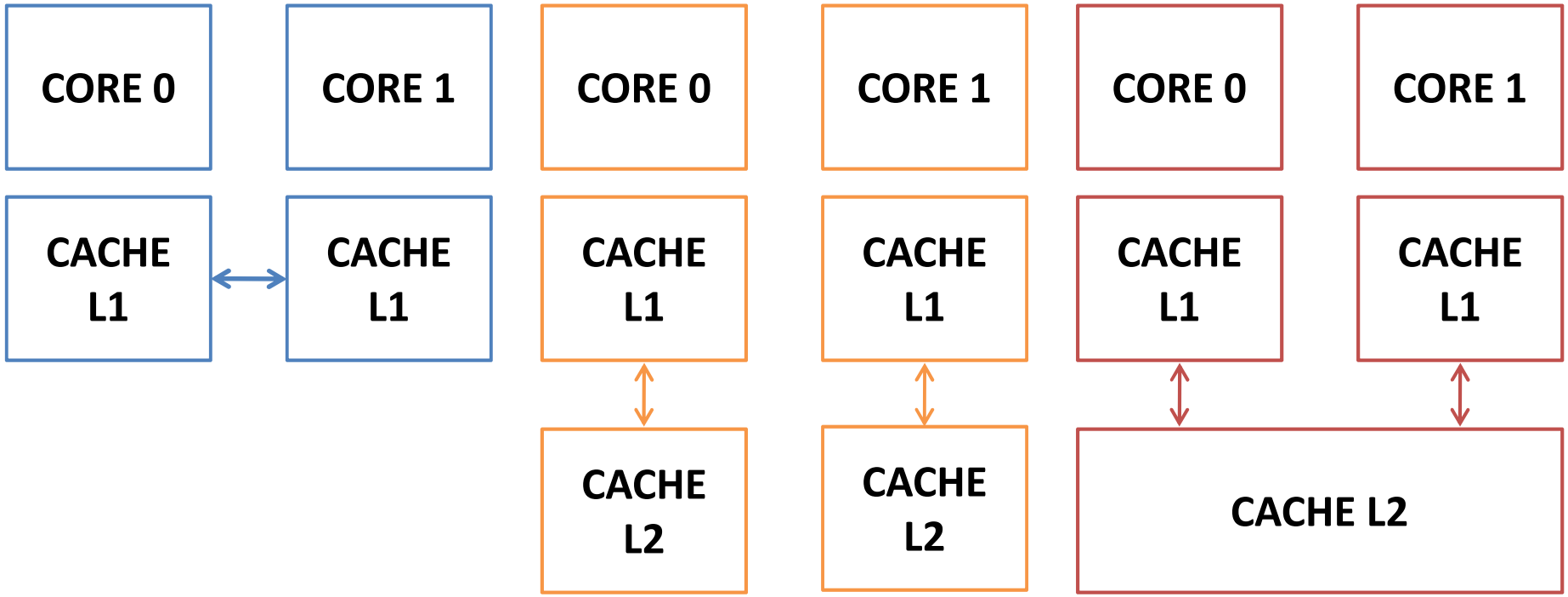
Único e Múltiplos Core

- A idéia básica é replicar os núcleos em uma única pastilha de silício.
  - Mas como fica a organização de memória?



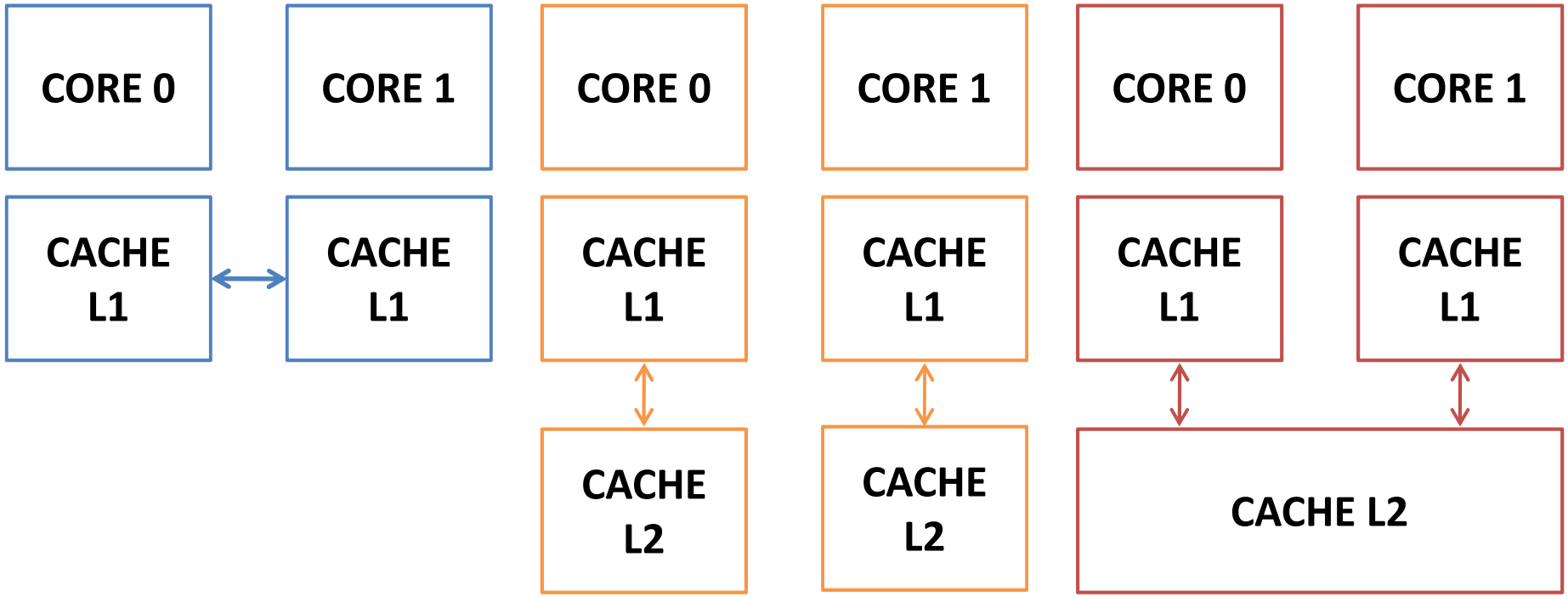
Organização de Memória

- Observe que podem ter várias organizações distintas
  - Como definir a melhor?

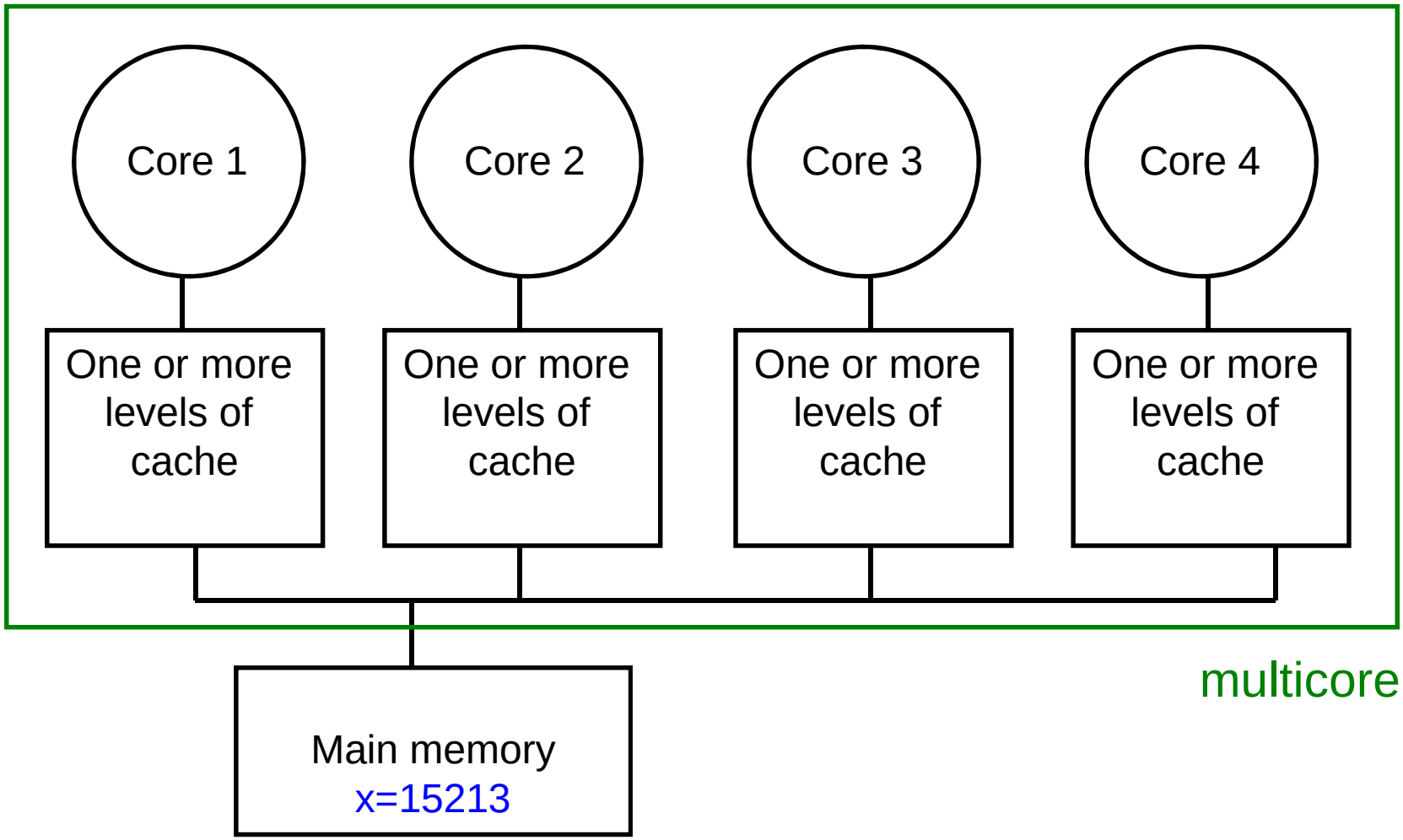


Organização de Memória

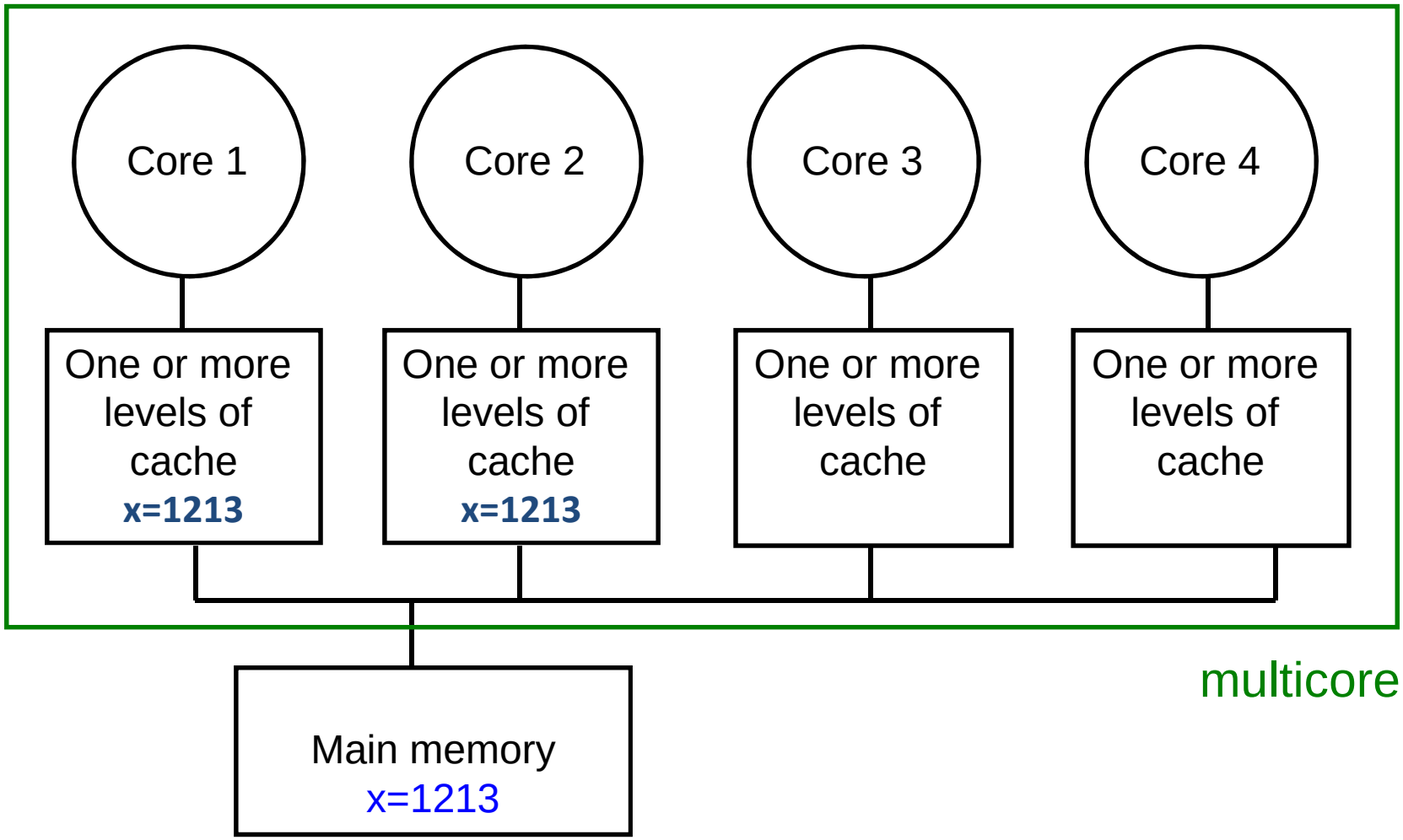
- Observe também que independente da organização, sempre uma memória será compartilhada, nem que seja a memória RAM



Problemas do Compartilhamento



Problemas do Compartilhamento



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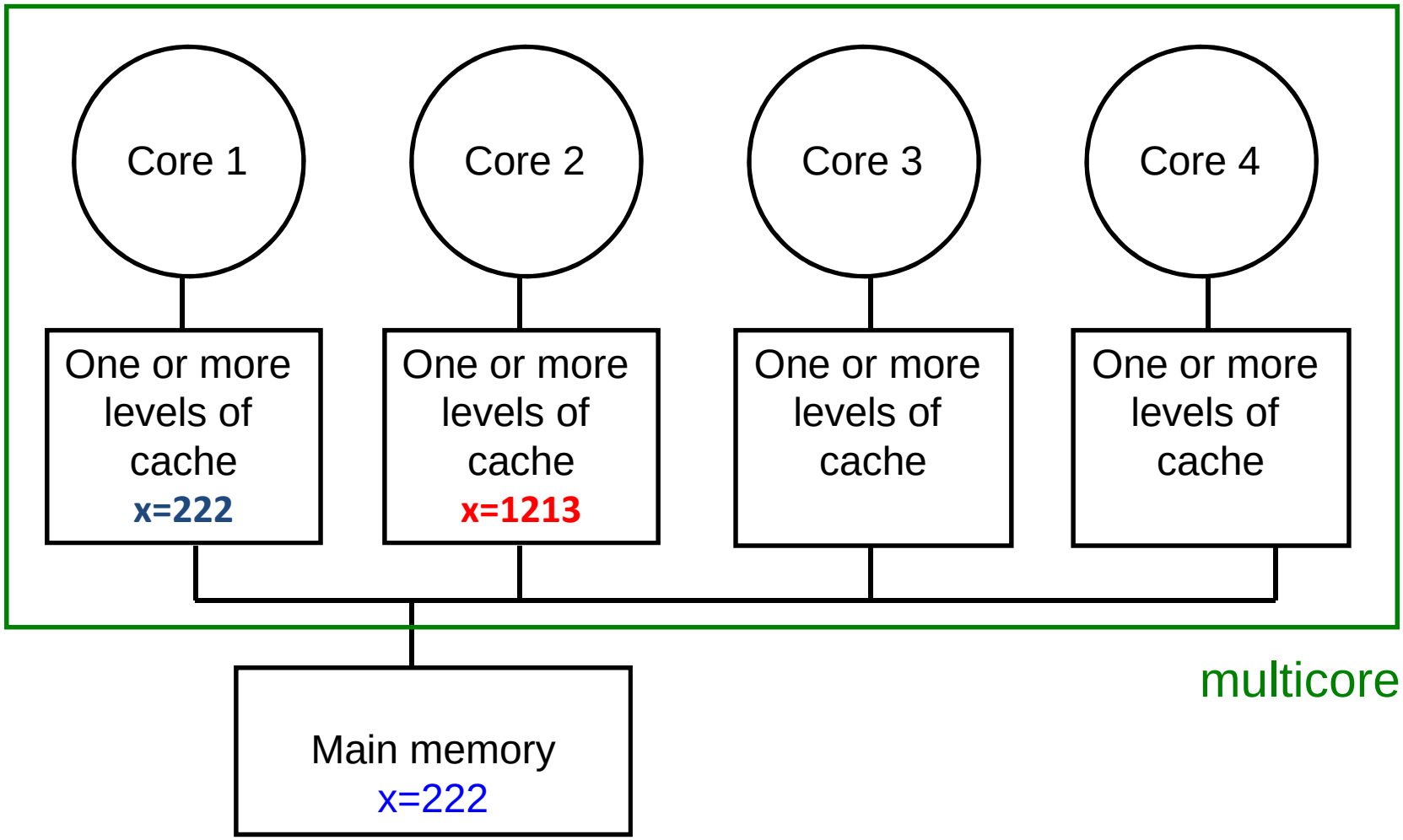
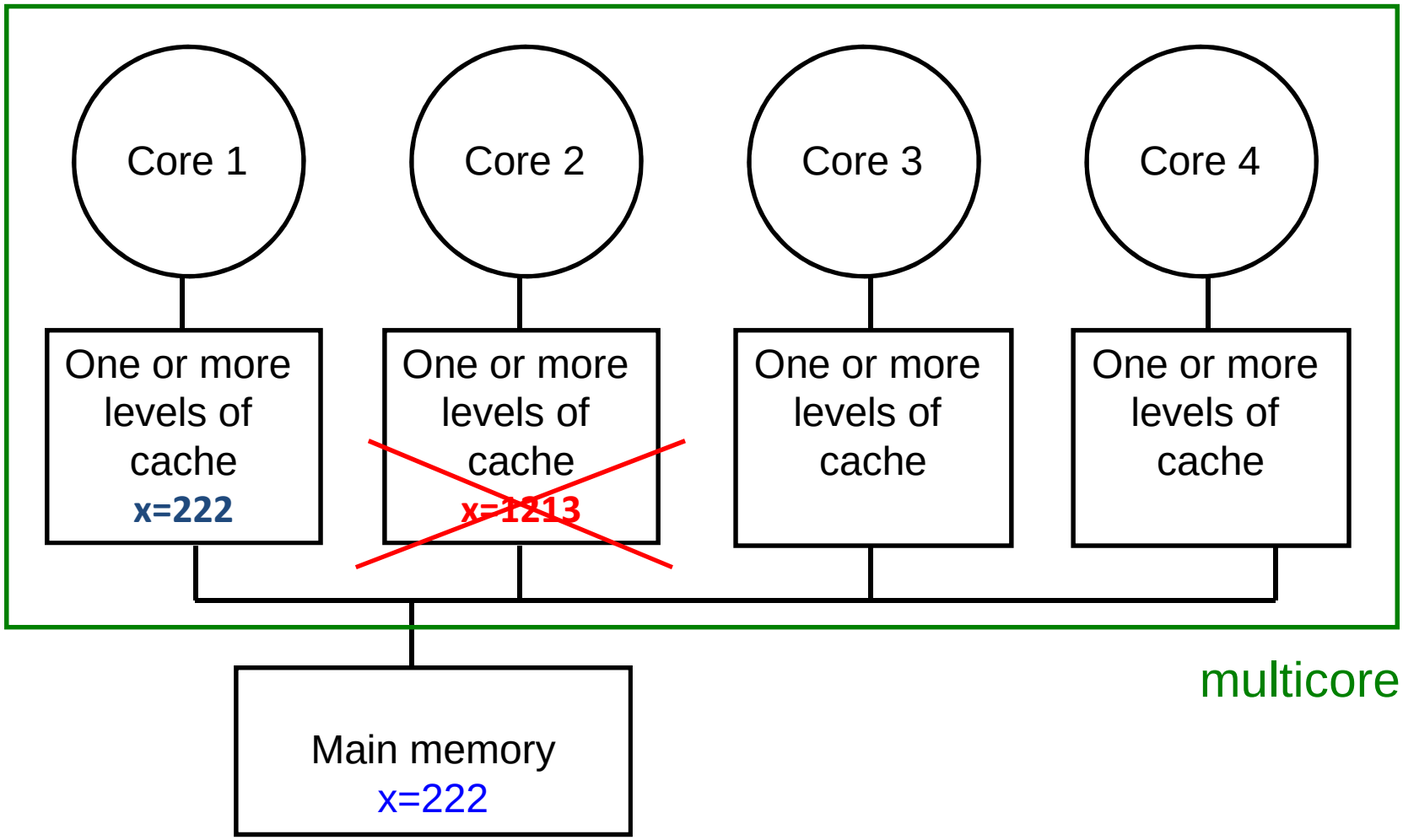


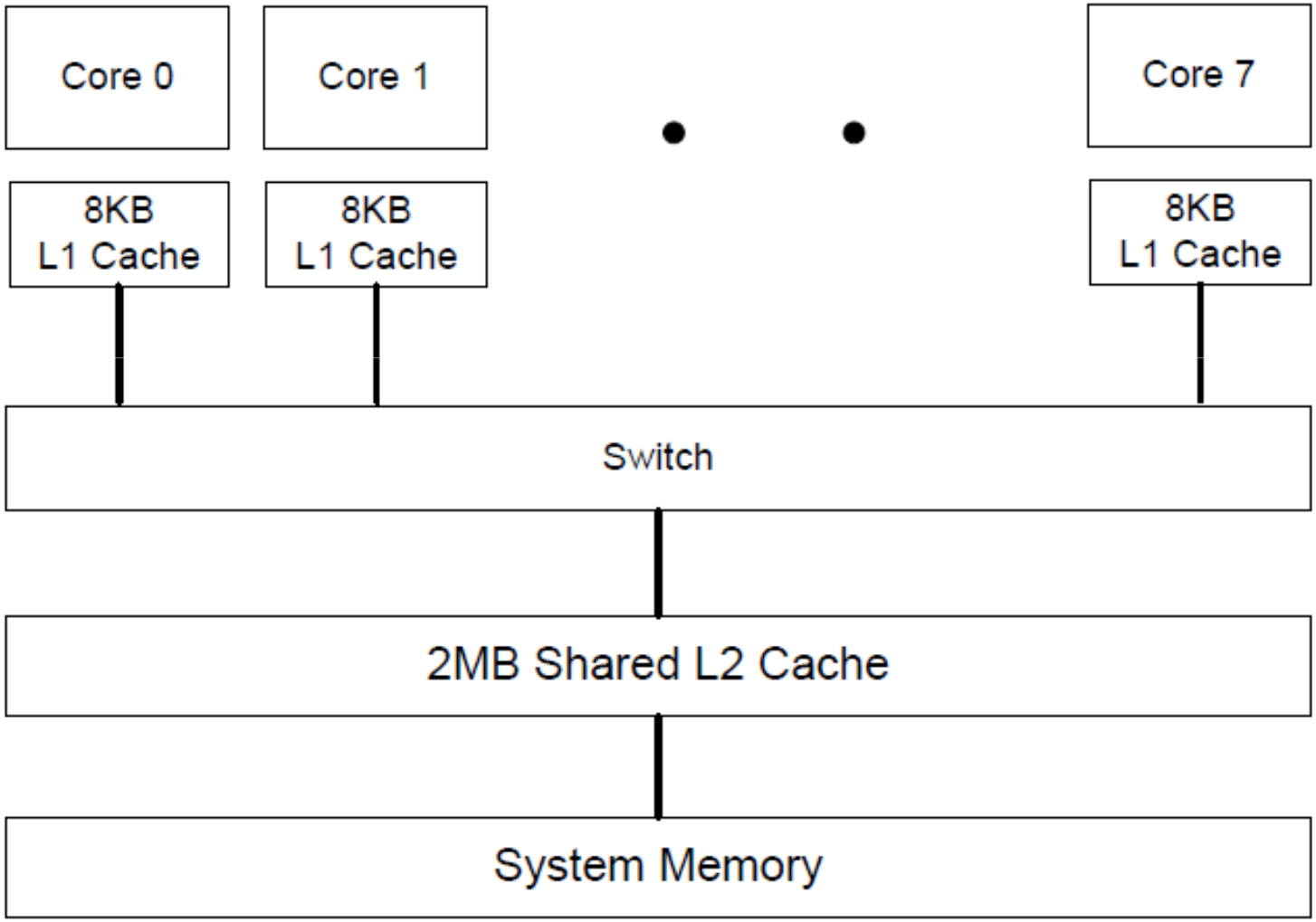
Problemas do Compartilhamento



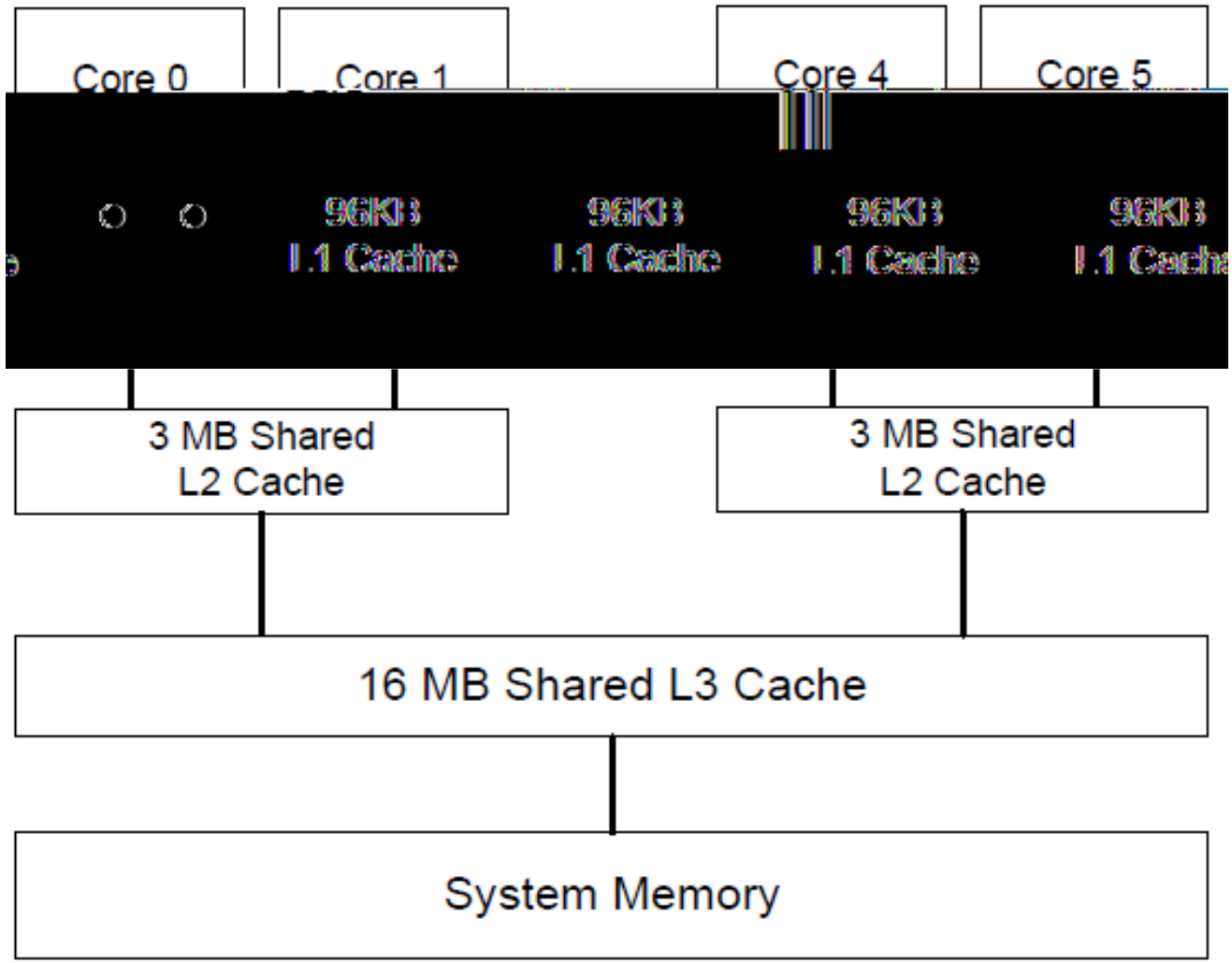
Exemplos Reais de Processadores

- 8-Core Sun UltraSPARC T2
- Intel 6-Core Dunnington
- Sun 16-Core Rock
- 64-Core Tile64
- Intel Xeon Quad Core

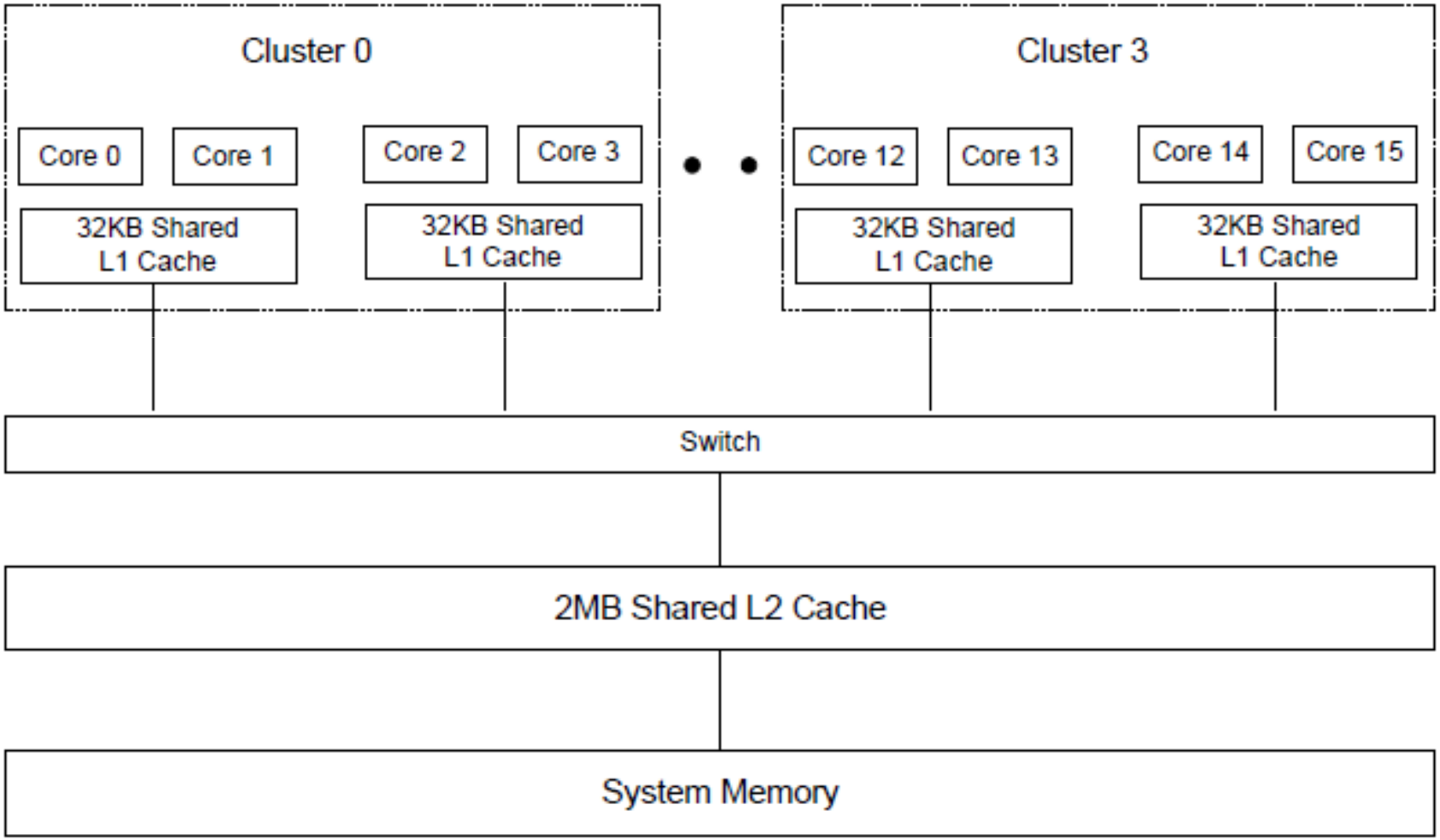
8-Core Sun UltraSPARC T2



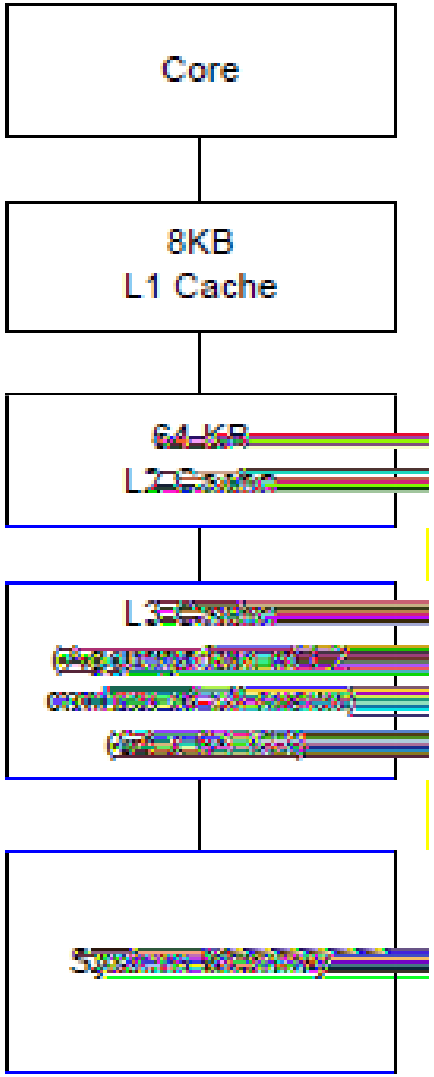
Intel 6-Core Dunnington



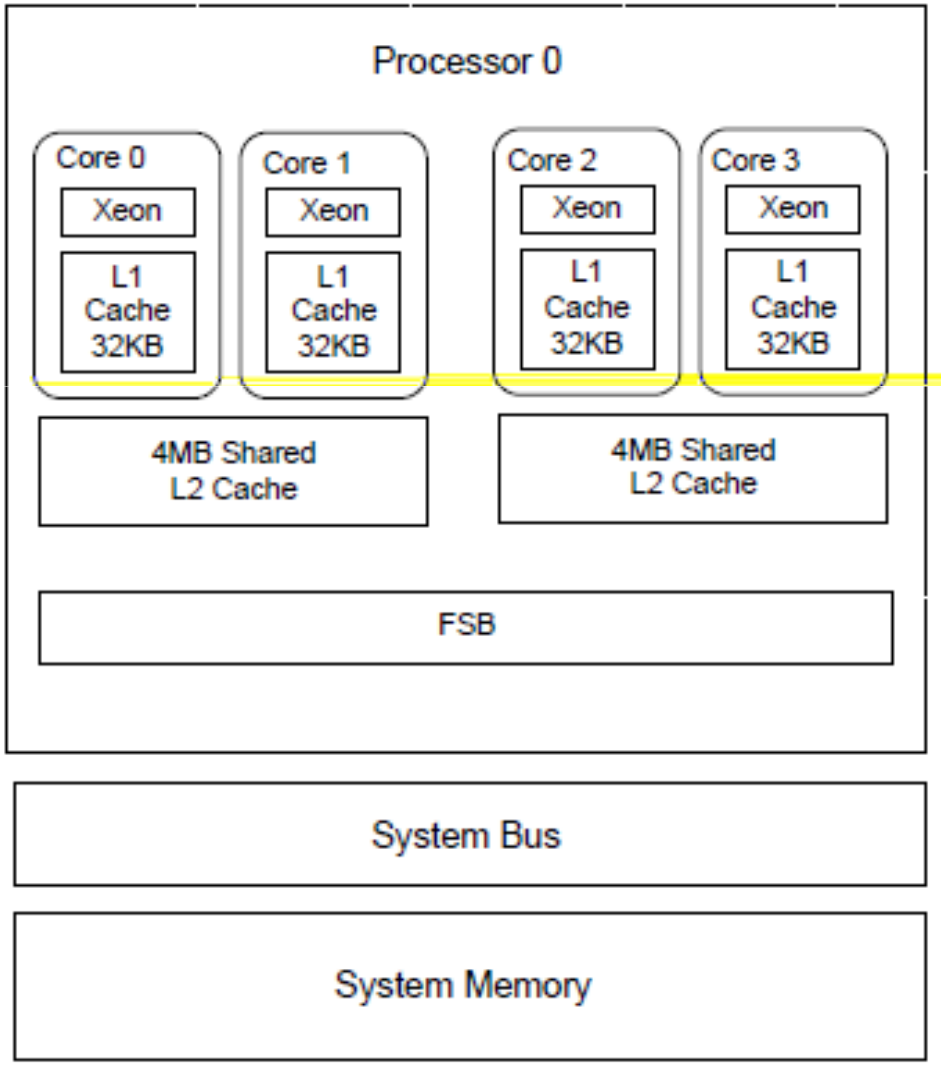
Sun 16-Core Rock



Um Core de um 64-Core Tile64



Intel Xeon Quad Core



Referências