1990 Worldwide Developers Conference

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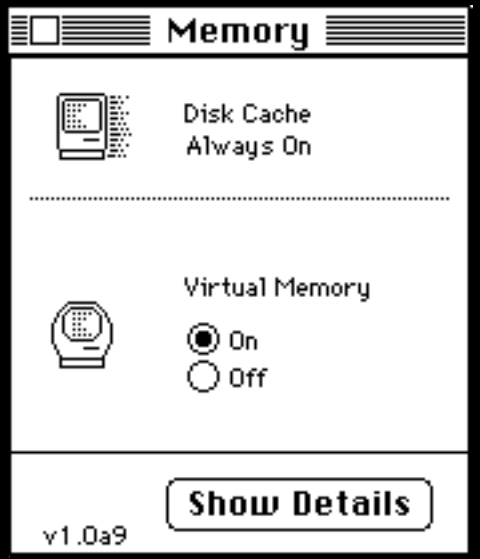
A Virtual Engineer

Useful Facts About VM

- Interface
- 2 to 1 is the default
- Backing store file facts
  - It’s big
  - It’s not contiguous



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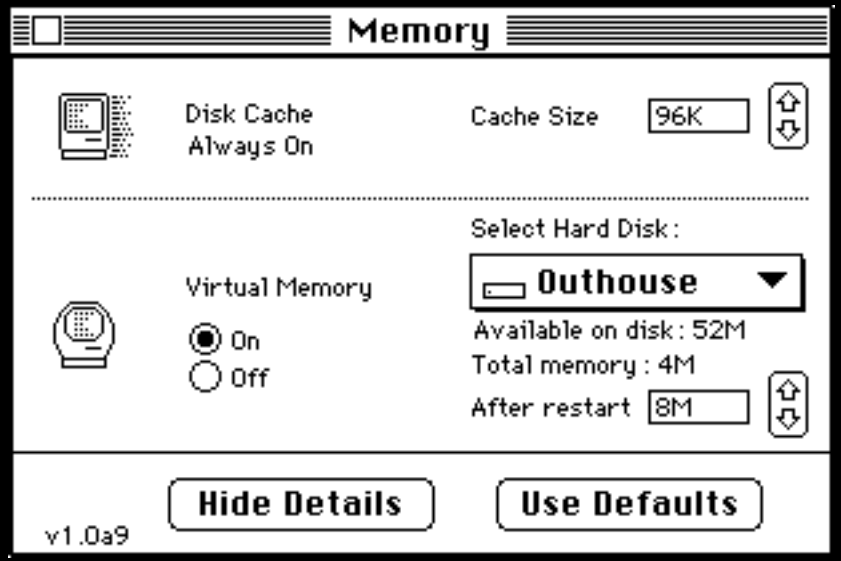


Driver Compatibility

- Load your driver into the system heap
- Use _Read and _Write to move data

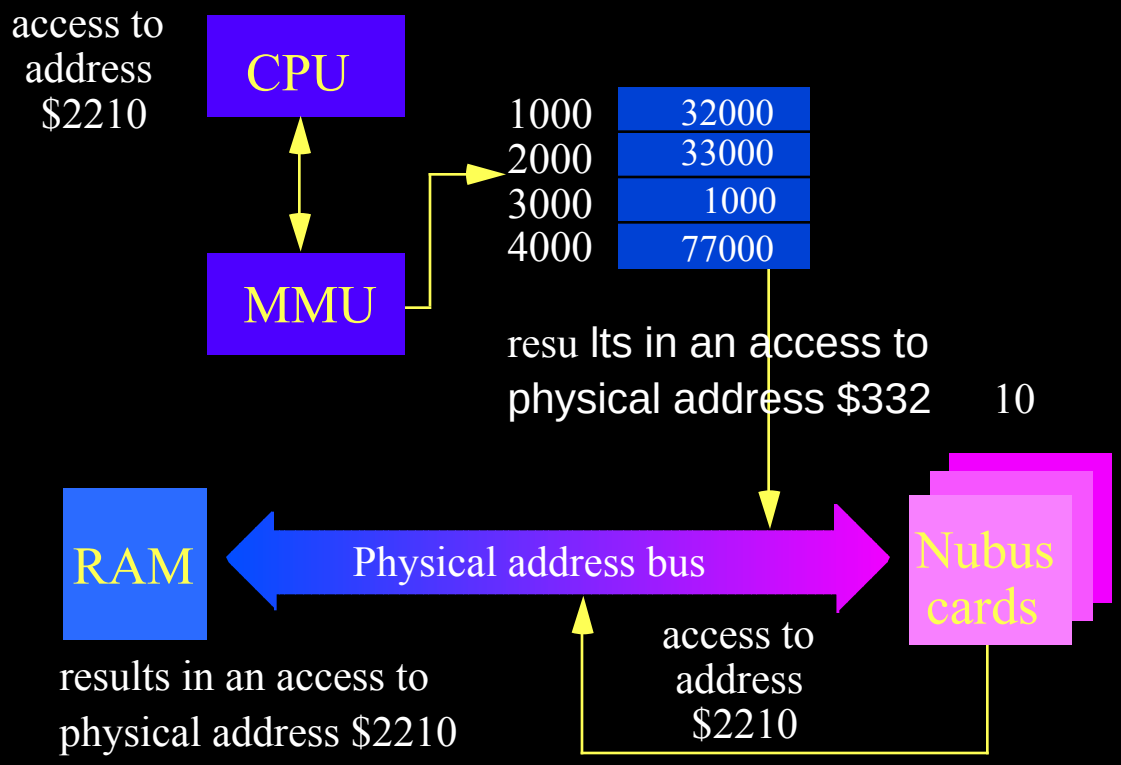
Applications Compatibility

- Follow Inside Macintosh
- Get Privileged Instructions out of your applications
- Should your product include a driver?

Hardware Compatibility

- Non-NuBus masters, don’t worry
- Don’t assume contiguous memory
- NuBus Masters
  - Allocate shared buffers at system startup time

Hardware Compatibility



Privileged Instructions

- “Just Say No” to Privileged Instructions
  - Use system services where possible
  - For Example
    - MOVE CCR,Dn instead of
      MOVE SR,Dn to get condition codes

MultiMedia and VM

- Hold it down for the duration of animation when under VM
- Tell users to turn off VM

Sound Applications and VM

- System 7.0 Sound Manager is VM compatible
- Don’t roll your own

VM Do’s and VM Don’ts

- Don’t assume your application can get bigger
- Use the Memory Manager calls
  - Don’t out-guess the memory manager
  - We may optimize the Memory Manager for VM performance
  - get future improvements for free!

How Paging May Affect You

- You are paged
  you probably assumed you would
- Others are paged
  did you remember those other processes?

Should you reconsider how you use memory?

Hold vs. Lock

- You should Hold
- It’s faster to hold anyway

Debuggers

- You need new debuggers
  - MacsBug 6.2a1 is VM friendly
  - Tool developers have been seeded

The power to be your best