

Subject: : AmigaOS4

Topic: : DMA buffer for PCI busmaster headache

Re: DMA buffer for PCI busmaster headache

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The experiment in my first post did exactly that:

- 1) Enter hypervisor and save context.
- 2) Flush caches
- 3) get/set memory attributes on buffer to inhibit caches (CurrentAttr | MEMATTRF_CACHEINHIBIT).
- 3) get physical address of buffer and store in PCIe device DMA base register
- 4) Return to user space and restore context
- 5) Write the command to virtual buffer address. Physical address access will result in a DSI 😞)
- 6) Signal pci device that the new command is available.

I don't know why but this didn't work for me. Still no response.

In the meantime I changed the sequence a bit:

- 1) Enter hypervisor and save context
- 2) Get physical address and store in PCI device DMA base register
- 3) Return to user space and restore context
- 4) Write command to virtual address
- 5) Flush cache to memory -> CacheCleanE() with CACRF_ClearD Flag set
- 6) Signal PCI device that the new command is available.

Now I receive an PCI interrupt when the response is available in another DMA buffer in memory. And this second buffer reads the response that I expected.

Strange that inhibiting caches for my buffer didn't do the trick. But at least it works now.