

Re: newbus ioport usage

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From: M. Warner Losh (*imp_at_bsdimp.com*)

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Date: Tue, 27 Jan 2004 03:21:19 -0700 (MST)

To: msmith@freebsd.org

In message: <E4469364-5092-11D8-8DD8-000393C72BD6@freebsd.org>

Mike Smith <msmith@freebsd.org> writes:

: The whole reason for the sysresource device was to have something
: sitting on resources that the AML said had "something" behind them
: so that they didn't get handed out to devices on eg. PCI. If you're
: in the same sort of scope as the sysresource device, it's fair to
: say that you know more than eg. the PCI bus resource code does about
: whether you can use the resource in question.

Yes. It is a form of resource enumeration that belongs to ACPI.
Therefore, ACPI should manage it and dole it out to its children which
are based on the AML. That's what it is there for. It is akin to the
PCI code assigning resources based on the BARs that a child has.
However, only akin, because the entire resource space is enumerated in
the bus, not the children, for ACPI. The sysresource stuff was a
means to an end, not the only way to that end. I'm starting to think
that the right way to go is to reserve EVERYTHING up front, and then
have all the acpi_foo devices allocate out of that reservation.

In this way it is similar to a BAR that has been assigned by the BIOS,
but isn't allocated by a child device on pci. In the code I'm working
on, those resources are reserved at the bus level and given to the
child if it asks for it later. Well, it is a little more complex than
that because the child device actually owns the resource, but the bus
is who assigns ownership. In ACPI, since the resource maps aren't
child specific, the ownership should resided in the bus layer. So
instead of belonging to acpi_sysresource0, it would belong to acpi0.
This may also help some downstream resource allocations, since they
would now be happening a little earlier in the game.

Warner

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