

Re: OpenVMS Seminar in Toronto (2005-02-24) a few points

Source: <http://unix.derkeiler.com/Newsgroups/comp.os.vms/2005-02/2563.html>

From: Robert Deininger (rdeininger_at_mindspringdot.com)

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In article <42228B4C.8CF0F9DB@comcast.net>, djesysno@spam.earthlink.net wrote:

>*Robert Deininger wrote:*

>> *Your comments seem particularly*

>> *naive.*

>

>*Well, in that case, I'll have to challenge you.*

>

>> *In article <112288g53rmok75@corp.supernews.com>, Dave Froble*

>> *<davef@tsoft-inc.com> wrote:*

>>

>> *>Robert Deininger wrote:*

>> >> *In article <4IadnW7fT-L9O73fRVn-tA@igs.net>, "John Smith" <a@anonymous.com>*

>> >> *wrote:*

>> >>

>> >> ...

>> >>

>> >>

>> >>>> *The last day for ordering an Alpha system from HP will be 2006-09-30*

>> >>>> *with last ship day to be 2006-12-31.*

>> >>>>

>> >>>> *Will HP make a big splash and cast this in stone, or is this a trial*

>> >>>> *balloon ? If VMS sales are growing, this would mean that Alpha sales*

>> >>>> *are growing and there should be no reason to can the product that has*

>> >>>> *no more development costs to it.*

I missed this bit of tripe earlier, and I've lost track of the original author. But I'll emphasize what I thought was obvious from what HP has published recently:

1. VMS sales have been growing modestly.
2. Tru64 sales have been falling.
3. Alphaserver sales have been falling, not growing.

>> >>>> *HP/Compaq hadv long and often stated*

>> >>>> *that they would sell alphas as long as demand warranted it.*

>> >>>>
>> >>>>1) *Alpha performance only has one direction to go vs. Itanic at this point –*
>> >>>>*down.*
>> >>>>2) *HP will ensure that new Alpha's remain more expensive than IA64.*
>> >>
>> >>
>> >> *Since Alpha servers are quite a lot more expensive to build than*
>> >> *Integrity, that seems reasonable. I suppose HP could cut the price of*
>> >> *Alpha systems and sell them at a loss, and undercut IA64 that way. I*
>> >> *can't think of a good reason to do so off the top of my head.*
>> >>
>> >> ...
>> >
>> > *You've been singing this song for a while now, with never any details.*
>>
>> *First, I don't sing. Ever.*
>>
>> *I think it should be fairly obvious that cost details are proprietary, and*
>> *it is no accident that I omit them. Ok?*
>
> *Hhmmm... Proprietary costs? Does HP print its own money? ; -)*
>
>> > *The way I see it, if the development is done, and it's just cranking out*
>> > *more boxes, it's justifiable to question your claim. What part(s) is*
>> > *causing the cost to be more?*
>> >
>> > *Enclosures? the tooling is in place, and steel is steel.*
>>
>> *Do you design and buy many enclosures? Do you have any idea how many*
>> *details can be added or left out in a "simple" enclosure?*
>
> *I should think all of them. Build one basic enclosure, and add elements*
> *to order if, as you say, these are "low volume" products. To me, "low*
> *volume" products are one-offs. Guess it depends on the observer's*
> *perspective.*

Sorry, I'm not talking about what **could** have been done to design a cheaper enclosure. Other folks have brought that into the discussion. I'm talking about the actual design as it exists today. The enclosure was designed several years ago. It isn't going to change now. So the cost is pretty much fixed. It won't magically go down over time. Compaq/HP paid for the design and the tooling already; that's NOT part of the price the supplier gets for each piece. My point is that there is likely very little HP can do today to get the current enclosure any cheaper. A new, cheaper enclosure could be designed. But then the rest of the system would have to be re-qualified (cooling, EMI, shake and drop, ...) and perhaps modified. The range of modifications that are feasible without major redesign are not going to save much cost.

The story is similar with power supplies, circuit boards, heat sinks, fans, and a lot of other mundane stuff.

Here's the way I started into this thread: "Since Alpha servers are quite a lot more expensive to build than Integrity, ..."

I'm still somewhat surprised that folks found this statement controversial. (I guess that proves that I am naive, since EVERYTHING in C.O.V. is controversial. :-)

>> *The details all*

>> *cost money. Steel is NOT just steel, and plastic is NOT just plastic. A*

>> *change in color scheme costs significant design money, for example.*

>

>*Really? How many times does paint for steel have to be re-designed? How*

>*'bout color additives for plastics? I doubt there's much difference*

>*beyond the obvious subtleties from one lot to the next. No additional*

>*costs there.*

It seems that when you change the color of some plastics, the mechanical characteristics change enough to effect the casting process. I've been told the black LK463 keyboard uses different molds than the off-white predecessor, just because the color change makes the plastic different. And then the paint that's silk-screened onto the key caps had to change also. Just a simple example.

I'm not suggesting that the color of the box makes alphaservers more expensive than itaniums. I'm pointing out that "trivial" changes to an existing design (to reduce cost, or for other reasons) may have surprising consequences.

>> *>CPUs? Ok, what's the cost of an Alpha CPU, and an itanic, to HP?*

>>

>> *Yeah, like I'm going to post that here. The difference is BIG.*

>

>*I think he meant the delta from one production run to the next (same*

>*spec.'s, same quantity per run, same etc.).*

Ah, maybe I misunderstood the question. Well, for alpha vs. itanium, same quantity of CPUs ordered, there's a big difference in price. There's a single vendor for each chip, so HP can't take the business elsewhere. That's the reality today; once Digital got out of the CPU fabricating business, this sort of lock-in for Alpha CPUs was pretty inevitable.

>> *>Disks? No possible difference.*

>>

>> *Disks are the same. The two styles of front-loading, hot-swap*

>> *storageworks bricks are quite different, and I expect the costs are quite*

>> *different as well.*

>

>*I didn't think the old-style SBBs (for BA35x shelf) were being made*

>anymore.

>

>As to the Compaq-style disks, should only differ in power dissipation,

>capacity, transfer-rate, spindle speed, etc. as technology advances.

>Nothing unexpected there.

I'm thinking of the Compaq style in Alphaservers vs. the HP style in Integrity servers. Both styles of brick hold the same disk drives.

Different design decisions for the bricks led to different costs, and after the inevitable markup, different prices for customers. And those design decisions were made a few systems ago. What we might consider a bad design now (from a cost standpoint) might have been very reasonable 5 years ago.

If you could take the disk drive bay from (for example) an rx2600 and use it in (for example) a DS15, there would be some money-saving options. But of course they aren't interchangeable, either mechanically or electrically. So this cost-saving improvement would likely require changing the chassis, a few circuit boards, and maybe the cooling systems.

>> >Motherboard and components? They're all in production, just keep producing.

>>

>> Yup, that's easy. Just sign the checks to all the suppliers.

>

>hp *IS* making enough off sales to make more product to sell, right?

My point is that the cost of the parts is pretty much fixed. The collection of parts and labor that go into a DS15 is more expensive than the collection that goes into a DS10. And both are more expensive than the collection that goes into an rx2600. "Just keep producing" is fine, but it's not a prescription for lowering prices. If you want to lower the costs, you have to change the collection of parts, which means you have to do some redesign.

>(I know I say they act like they flunked out of business school, but the

>implication in your statement could send hp's stock to bottom of the

>Marianas Trench in pretty short order!)

You completely misunderstood my point. AFAIK, HP doesn't have any trouble paying its suppliers.

>> Have you

>> designed and bought many high-performance circuit boards lately?

>

>Again, how many times to these have to be redesigned? What worked for

>one lot should work for the next, bug-for-bug. No additional costs

>there, either.

Sure, costs will be about the same for each lot. No redesign, no falling prices.

>> *This is*
>> *an area where lots of tradeoffs are possible. Added costs accumulate*
>> *pretty fast.*
>
>*Please elucidate. I don't come up with any "added costs", unless you're*
>*talking about products not currently in production (which do not relate*
>*to this discussion).*

I'm talking about the decisions that lead to the existing system designs, and the resulting cost to produce the systems. Within the range of reasonable designs, DS15 engineers tended to make decisions that resulted in higher cost, compared to their counterparts working on rx2600, for example. That seemed to be the case for multiple generations of systems on both sides. That's what I mean when I say the HP culture was better at designing low-cost servers than the Digital culture.

If we decide in 2005 that we don't like those design decisions because they lead to high costs, we'd have to go back and redesign. We can't tweek much cost out of an existing design.

In another post, Bill suggests HP should have somehow redesigned the alphas to take advantage of the lower-cost culture on the Itanium side. I guess Bill thinks that would have been a fairly modest effort. Having been through a few system projects (alpha and itanium), I disagree. Making a DS15-like system based on Integrity server heritage would have taken MUCH longer than basing it on Alphaser server heritage.

>> *>Memory? Another commodity. And IA64 seems to require more.*
>>
>> *Memory chips are pretty much commodities. DIMMs and RIMMs often are not.*
>> *If you think sourcing memory components for servers is trivial, you*
>> *probably haven't thought about it very much. But memory cost is probably*
>> *not a big differentiator between alpha and integrity.*
>
>*...and here again, we're talking about kit coming off the line now, not*
>*futures. No additional costs there, either.*
>
>> *>Where is your extra cost to continue to pump out DS15s, DS25s, ES45s?*
>>
>> *Just buy the parts and put them together.*
>
>*That's the long and the short of it, when you burn-away the chaff.*
>
>> *Same as rx1600, rx2600,*
>> *rx4640. Or your run-off-the-mill PC. We should expect all of them to*
>> *cost the same, right?*
>
>*See the nearest business dictionary for the concept of "competitive*
>*pricing", and remember: we're talking about stuff currently in*
>*production - *NOT* futures!*

Right. I started out responding to the complaints about the current prices of the current systems. I'm not discussing hypothetical designs that might have been (but weren't) done in the past, or that might be done in the future.

>> *>Possibly the big stuff has rather high cost low volume parts. But the
>> >design is over.*
>>
>> *All the alphaservers and all the integrity servers (and all the PA-RISC
>> servers) are low volume products.*
>
>*...and your point is ... ? The costs remain more or less constant,
>unless you either:*
>
>*o Stop producing a product
>o Put a new product into production*

Yes. That's exactly my point.

>*We're not talking about either – we're talking about on-going
>operations, business as usual,*
>
>> *>I think it's time for this claim to gain some substance, or go away.*
>>
>> *Take it or leave it; I really don't care. Your comments seem particularly
>> naive. I don't think you want information; you want to argue. I'll take
>> your advice and go away.*
>
>*Well, if you must. I'd have preferred to see some substantiation. So
>far, every one of these has failed to show where costs for current
>products change significantly.*

So you agree with me? Current alphas tend to be expensive, and I expect them to stay expensive until they go EOL. Because the price comes from the cost to produce the system, and the cost was pretty much determined years ago by the design trade-offs.