

## Re: My take on ARC

**Source:** <http://coding.derkeiler.com/Archive/Lisp/comp.lang.lisp/2003-10/2316.html>

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**Date:** 10/20/03

Date: Mon, 20 Oct 2003 13:52:22 -0700

In article <BbXkb.3303344\$Bf5.452911@news.easynews.com>, Doug Tolton <doug@nospam.com> wrote:

> > *One of the premises of ARC's design is that speed doesn't matter because  
> > today's machines are so fast. I don't accept this premise. Speed only  
> > doesn't matter if you're not doing production work. If you're doing  
> > production work speed does matter because as soon as you start to process  
> > in volume your machine costs are directly proportional to your speed. If  
> > you can process customer requests twice as fast you only need half as many  
> > machines.*

>

> *Sorry, I very much disagree with this perspective. I do a \*great\*  
> amount of production work, and very few problems require more machine  
> speed. The largest cost of owning a machine and solving most business  
> problems do not relate to machine speed, they are directly tied to  
> programmer or operator productivity.*

I think this depends on what kind of business you're in. In a marginal business, like most Internet businesses are nowadays, this is probably true. But once you start to achieve real success on the scale of a Google or an Ebay then speed starts to matter more. Speed increases of a factor of 2 can translate into annual savings running into many millions of dollars. Even by Google's standards that's real money.

> *Processing a customer request is almost always directly proportional to  
> the amount of time it takes for the operator or programmer to do their  
> task.*

Only if there's a human in the loop.

> > *Yes, hardware is cheap, but the cost of the hardware is only a  
> > tiny fraction of the TCO of a machine. You have to find a place to put  
> > it, pay for the air conditioning, pay a sysadmin to maintain it and  
> > replace it every two years or so.*

>

> *If this is true, why don't you write everything in Assembly? Because it  
> will take 50 times as long to get it done.*

comp.lang.lisp: Re: My take on ARC

At some point in any optimization process you reach a point of diminishing returns. But that does not mean that efficiency is irrelevant. Certainly developer time matters also. But it's not the only thing that matters.

> *I'm sorry, I just disagree with this conclusion. As time advances*  
> *machine time is becoming less and less of a factor.*

Then why does Google's server farm keep growing instead of shrinking?

E.