Re: PID question

Source: http://sci.tech−archive.net/Archive/sci.electronics.design/2006−11/msg04822.html

- *From*: John Popelish <jpopelish@xxxxxxxx>
- *Date*: Thu, 23 Nov 2006 11:17:16 −0500

hondgm@xxxxxxxxx wrote:
(snip)

> On your
> next post where you say that "you must allocate several samples to your
> desired response time", do you mean that I should be taking an average
> of several samples before feeding it into the PID loop?

(snip)

Not at all what I think he meant.

Each sample you take must be used as quickly as possible, to minimize time delay inside your control loop.

I think what he meant was that it takes many cycles of your sample and control algorithm to restore the system to setpoint, after a disturbance, so just because you can sample and cycle your program 100k times per second, don't expect to recover, completely, from a step current error much faster than 10 to 100 sample times (100us to 1000 us), especially with load impedances other than for what the control loop tuning was optimized.
.