Re: best braking technique as one approaches red light

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- *From*: "Rod" <RodRodRodRod@xxxxxxxxxxx>

- *Date*: Thu, 23 Aug 2007 12:26:29 GMT

"quasi" <quasi@xxxxxxxx> wrote in message
news:fjsqc39e3qatnlst6517o3ddmfbbl2fuok@xxxxxxxxxx

> On Thu, 23 Aug 2007 07:40:45 −0400, quasi <quasi@xxxxxxxx> wrote:
>
> > On Thu, 23 Aug 2007 07:10:36 EDT, jeremy rutman
> > <jeremy_spagnet@xxxxxxxxxxx> wrote:
> >
> > > I'm traveling at a speed V
> > > when I see a red light
> >
> > ahead at distance d with probability to
> > change to green > as function
> > of time p(t), which for example could be
> > gaussian.
> >
> > > I would like to find the
> > > velocity profile v(t) that
> >
> > maximizes my velocity (averaged over all
> > scenarios
> > knowing p(t)) as I pass the light, with the
> > condition
> > that I have to stop if I hit the light when its
> > still
> > red.
> >
> > > It doesnt seem to fit the
> > > form of a standard
> >
> > functional
> >
> > > cauchy−riemann type
> > > problem. Has anyone an
> > > insight

> how to solve it?
>
> If you absolutely have to stop on red, then
> the
> probability function
> p(t) is irrelevant. You always should go at
> the
> maximum speed subject
> to the requirement that you must be able to
> brake to
> a full stop at
> the light if it's still red.
> quasi

No, the probability is relevant. If for instance the probability
of
being green is:
p(t)=0 for t<5 and
p(t)=1 for t=>5
then I should go the speed d/5.
The 5 in d/5 comes from the probability of being green.

Maybe I'm missing something, but it seems to me that you can't possibly do better than to go at the maximum possible speed for which it is still possible to stop. And there's no reason to do worse.