Subject: Re: TNMIN limits
Posted by Brian Larsen on Mon, 03 Dec 2007 14:36:17 GMT
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> Hi Brian;
> Would you please specify this method with a simple example in IDL? I'm
> interesting in this method but I can't make the head and tail of it.

Sure,

the example in help is not to bad either, I use it every time I go to
use the routine.

save this toy example as amoeba_test.pro then just .run amoeba_test

```
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
;   .run amoeba_test

FUNCTION min_me, P
;; function is the negative of the dist function
  RETURN, -(dist(100))[p[0],p[1]]
;; probably should have put in some error checking as this will error
if p<0 or p>99
END

; we start at P0
p0 = [67,45]                    ; random guess
;; you have to play with scale, it is in some sense the step size that
;; the amoeba uses, the smaller the closer to the answer but the
;; bigger chance of getting lost and taking forever
ans = amoeba(1e-5, p0=p0, scale=5, FUNCTION_name='min_me')
print, ans, -(dist(100))[ans[0], ans[1]]
;; lets check the answer
print, min(-dist(100))
;; which should be the right answer
end
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;

IDL> .run amoeba_test
% Compiled module: MIN_ME.
% Compiled module: $MAIN$.
      50.4927      50.1697
     -70.7107
     -70.7107
```

So we get the right answer. Great routine.

I will probably write something up and post it along with the
description from Charles Kankelborg (assuming he gives me the ok) on

my idl tips site, not as good as David Fanning's or Michael Galloy's but just trying to be mathy and let them do coding and especially graphics.
http://people.bu.edu/balarsen/Home/IDL/IDL.html

Ask away if you have any more issues, I have a lot of experience in beating this routine into submission. Forcing limits on the input variables happens in the function, you need to do something like if the value to too big or too small then return a large number so the amoeba will step away from that.

Cheers,

Brian

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