
Subject: NaN Magic or Why Me?!

Posted by [Mort Canty](#) on Tue, 13 Nov 2007 17:42:04 GMT

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Hi. Here's a trick with IDL: I'm running a neural network program (IDL 6.3, Windows XP) which is printing out a cost function as it goes:

```
1.41914e+006  332780.  328493.
 363745.  327434.  333099.
334286.  320390.  371921.
349013.  304647.  323247.
314879.  312924.  386168.
362931.  346616.  306625.
340137.  309213.  302789.
302587.  313369.  310620.
301379.  307119.  302866.
307930.  295240.  304881.
301841.  317709.  292358.
321169.  297112.  391706.
297928.  305506.  299264.
 315475.  288123.  292904.
308228.  294505.  288769.
305784.  299221.  359080.
295104.  297367.  302781.
290047.  277969.  285225.
279158.  283448.  306711.
282240.  283696.  283543.
294153.  -NaN  280851.
281700.  303358.
```

Did you see the NaN? Now watch: I restart the program under identical conditions:

```
1.41914e+006  332780.  328493.
 363745.  327434.  333099.
334286.  320390.  371921.
349013.  304647.  323247.
314879.  312924.  386168.
362931.  346616.  306625.
340137.  309213.  302789.
302587.  313369.  310620.
301379.  307119.  302866.
307930.  295240.  304881.
301841.  317709.  292358.
321169.  297112.  391706.
297928.  305506.  NaN
 315475.  288123.  292904.
308228.  294505.  288769
```

...

Cool huh? Sequence is identical but the NaN has moved (and changed sign to boot). That's not all. Now I logout and logon under a different user account. Same program, same IDL, same conditions:

```
1.41914e+006  332780.  328493.
363745.  327434.  333099.
334286.  320390.  371921.
349013.  304647.  323247.
314879.  312924.  386168.
362931.  346616.  306625.
340137.  309213.  302789.
302587.  313369.  310620.
301379.  307119.  302866.
307930.  295240.  304881.
301841.  317709.  292358.
321169.  297112.  391706.
297928.  305506.  299264.
315475.  288123.  292904.
308228.  294505.  288769.
305784.  299221.  359080.
295104.  297367.  302781.
290047.  277969.  285225.
279158.  283448.  306711.
282240.  283696.  283543.
294153.  446049.  280851.
281700.  303358.  355329.
288240.  297747.  315557.
287779.  314566.  272712.
290404.  278610.  281469.
297105.
```

Where'd it go?. Now the program runs forever without any NaNs. I'd like to post the code so you, too, can amaze your friends, but unfortunately the trick only works on my bloody computer.

Seriously, can someone, anyone, tell me might be going on?

Cheers

Mort

PS It's not a memory error. I replaced the DIMMS completely.
