
Subject: Re: smooth() bug in (at least) version 8.5.1
Posted by [Burch](#) on Fri, 02 Dec 2016 18:38:00 GMT
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On Friday, December 2, 2016 at 8:03:27 AM UTC-6, Helder wrote:

> Hi,
> I came across this bug and it's a "heavy" one, meaning that IDL crashes and you're thrown back out.
>
> The crashing commands are (try at own risk!):
> sm = smooth(indgen(512,511), 9, /edge_mirror)
> sm = smooth(indgen(512,510), 9, /edge_mirror)
>
> And just to be pedantic, I've tested a few other cases and these did NOT result in a crash:
> sm = smooth(indgen(512,512), 9, /edge_mirror)
> sm = smooth(indgen(511,511), 9, /edge_mirror)
>
> It appears that smooth (stopped?) being able to smooth rectangular arrays.
>
> By running the above from the command line I get the following error (for a couple of seconds on the command line terminal):
> % Array has a corrupted descriptor: <no name>
> % Execution halted at: \$Main\$
>
> And my IDL version.
> IDL> !version
> {
> "ARCH": "x86_64",
> "OS": "Win32",
> "OS_FAMILY": "Windows",
> "OS_NAME": "Microsoft Windows",
> "RELEASE": "8.5.1",
> "BUILD_DATE": "Nov 14 2015",
> "MEMORY_BITS": 64,
> "FILE_OFFSET_BITS": 64
> }
>
> I others are brave enough, could you let me know if it crashes on other versions of IDL?
Edge_mirror and _wrap have been added only in 8.1.
>
> Cheers,
> Helder

It failed for me too. However, I was able to work around it by doing the following:

```
IDL> arr = indgen(512,511)
IDL> sm1 = smooth(arr, [9,1], /edge_mirror)
IDL> sm2 = smooth(sm1, [1,9], /edge_mirror)
```

Interestingly, this only failed for me when using integer types. For example, when using floats it worked fine:

```
IDL> arrFloat = float(arr)
IDL> smFloat = smooth(arrFloat, 9, /edge_mirror)
```

and to show that I get the same answer as above (at least in this case) by smoothing along each dimension in separate commands:

```
IDL> smFloat1 = smooth(arrFloat, [9,1], /edge_mirror)
IDL> smFloat2 = smooth(smFloat1, [1,9], /edge_mirror)
IDL> print, moment(smFloat2 - smFloat)
      0.00000      0.00000      NaN      NaN
```

```
IDL> !version
{
  "ARCH": "x86_64",
  "OS": "darwin",
  "OS_FAMILY": "unix",
  "OS_NAME": "Mac OS X",
  "RELEASE": "8.5",
  "BUILD_DATE": "Jul 7 2015",
  "MEMORY_BITS": 64,
  "FILE_OFFSET_BITS": 64
}
```

-Jeff
