Subject: Re: Random convolution ?
Posted by David Fanning on Thu, 08 Jul 2004 14:30:38 GMT
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Emmanuel Christophe writes:

> I got a random effect using convolution:
>
> ----------
> imagetest=indgen(256,256,224)
> ker=indgen(1,3,5)
> r1=convol(double(imagetest),double(ker),/edge_truncate)
> r2=convol(double(imagetest),double(ker),/edge_truncate)
> r3=convol(double(imagetest),double(ker),/edge_truncate)
> print, max(abs(r1-r2))
> print, max(abs(r1-r3))
> print, max(abs(r2-r3))
> end
> ----------
>
> The first time, I got
> IDL> .GO
> 85.961538
> 793.00000
> 768.00000
>
> and the second time:
> IDL> .GO
> 793.00000
> 793.00000
> 0.0000000
>
> And all results should be zero... I suspect a memory effect but how ?

Don't know. I get all zeros every time I run this.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Random convolution ?

Posted by Emmanuel Christophe on Thu, 08 Jul 2004 14:50:25 GMT
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David Fanning wrote:
> Emmanuel Christophe writes:
>
>
>> I got a random effect using convolution:
>>
>> ----------
>> imagetest=indgen(256,256,224)
>> ker=indgen(1,3,5)
>> r1=convol(double(imagetest),double(ker),/edge_truncate)
>> r2=convol(double(imagetest),double(ker),/edge_truncate)
>> r3=convol(double(imagetest),double(ker),/edge_truncate)
>> print, max(abs(r1-r2))
>> print, max(abs(r1-r3))
>> print, max(abs(r2-r3))
>> end
>> ----------
>>
>> The first time, I got
>> IDL> .GO
>>   85.961538
>>   793.00000
>>   768.00000
>>
>> and the second time:
>> IDL> .GO
>>   793.00000
>>   793.00000
>>   0.0000000
>>
>> And all results should be zero... I suspect a memory effect but how ?
>
>
> Don't know. I get all zeros every time I run this.
>
> Cheers,
>
> David
>

Do you reach the memory limits of your systems ? Or after several tries
? I also have the problem on only one of two system...

Subject: Re: Random convolution ?

Posted by David Fanning on Thu, 08 Jul 2004 15:20:43 GMT
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Emmanuel Christophe writes:

> Do you reach the memory limits of your systems ? Or after several tries
> ? I also have the problem on only one of two system...

No, I didn't run into memory limits. I have 1GByte of RAM
and 2 GByte of virtual memory on this machine.

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Random convolution ?
Posted by R.G. Stockwell on Thu, 08 Jul 2004 17:21:38 GMT
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"Emmanuel Christophe" <melaneum555@yahoo.fr> wrote in message
news:ccjkta$o61$1@news.cict.fr...
...
> The first time, I got
> IDL> .GO
> 85.961538
> 793.00000
> 768.00000
>
> and the second time:
> IDL> .GO
> 793.00000
> 793.00000
> 0.0000000

Hi,
here are my results, (win2000 idl 6.0, 512mb ram, 1gb swap,
usage peaked at ~750 mb)

Weird!
% Compiled module: $MAIN$.
IDL> .GO

112.00000

112.00000

0.00000000

IDL> .GO

0.00000000

0.00000000

0.00000000

I haven't even looked into it, i might have some time tomorrow.

Cheers,
bob

Subject: Re: Random convolution ?
Posted by K. Bowman on Thu, 08 Jul 2004 20:28:15 GMT
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In article <MPG.1b57087d5ec808c9897cb@news.frii.com>,
David Fanning <davidf@dfanning.com> wrote:

>> The first time, I got
>> IDL> .GO
>> 85.961538
>> 793.00000
>> 768.00000
>>
>> and the second time:
>> IDL> .GO
>> 793.00000
>> 793.00000
>> 0.0000000
>>
>> And all results should be zero... I suspect a memory effect but how ?
>
> Don't know. I get all zeros every time I run this.

Hmm, me too.

IDL Version 6.0, Mac OS X (darwin ppc m32). (c) 2003, Research Systems,

Inc.

```
IDL> @convol_test
      0.0000000
      0.0000000
      0.0000000
IDL> @convol_test
      0.0000000
      0.0000000
      0.0000000
```

Ken Bowman

Subject: Re: Random convolution ?
Posted by Chris[2] on Thu, 08 Jul 2004 22:30:20 GMT
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Hi Emmanuel and Bob,

Can you tell me your IDL version and platform? And also whether you have multiple CPUs on your machine? The following IDL commands should give this information:

```
IDL> print,!version
{ x86 Win32 Windows Microsoft Windows 6.0 Jun 27 2003 32 64}

IDL> help, !cpu, /struct
** Structure !CPU, 6 tags, length=24, data length=24:
HW_VECTOR LONG 0
VECTOR_ENABLE LONG 0
HW_NCPU LONG 2
TPOOL_NTHREADS LONG 2
TPOOL_MIN_ELTS LONG 100000
TPOOL_MAX_ELTS LONG 0
```

I can't seem to reproduce your bug on my machine using IDL6.0. Do you have any other cases that fail?

However, there was a known bug with CONVOL in IDL5.6 and IDL6.0, where it could produce incorrect results using multiple threads. This has been fixed for IDL6.1.

-Chris Torrence
Research Systems, Inc.

Subject: Re: Random convolution ?
Posted by Emmanuel Christophe on Fri, 09 Jul 2004 06:03:21 GMT
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Hi

Here are the information about the system where convol bug:

```
IDL> print, !version
{ sparc sunos unix Solaris 6.0.3 Feb 26 2004      32      64}
IDL> help, !cpu, /struct
** Structure !CPU, 6 tags, length=24, data length=24:
   HW_VECTOR       LONG                 0
   VECTOR_ENABLE   LONG                 0
   HW_NCPU         LONG                 3
   TPOOL_NTHREADS  LONG                 3
   TPOOL_MIN_ELTS  LONG            100000
   TPOOL_MAX_ELTS  LONG                 0
IDL>
```

On another system, same version, same operating system, but more memory
and only 2 CPUs, everything seems to be fine.

Chris Torrence wrote:
> Hi Emmanuel and Bob,
>
> Can you tell me your IDL version and platform? And also whether you have
> multiple CPUs on your machine? The following IDL commands should give this
> information:
>
> IDL> print,!version
> { x86 Win32 Windows Microsoft Windows 6.0 Jun 27 2003 32 64}
>
> IDL> help, !cpu, /struct
> ** Structure !CPU, 6 tags, length=24, data length=24:
> HW_VECTOR LONG 0
> VECTOR_ENABLE LONG 0
> HW_NCPU LONG 2
> TPOOL_NTHREADS LONG 2
> TPOOL_MIN_ELTS LONG 100000
> TPOOL_MAX_ELTS LONG 0
>
> I can't seem to reproduce your bug on my machine using IDL6.0. Do you have
> any other cases that fail?
>
> However, there was a known bug with CONVOL in IDL5.6 and IDL6.0, where it
> could produce incorrect results using multiple threads. This has been fixed

> for IDL6.1.
>
> -Chris Torrence
> Research Systems, Inc.
>
>

Subject: Re: Random convolution ?
Posted by R.G. Stockwell on Fri, 09 Jul 2004 15:25:55 GMT
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"Chris Torrence" <chris_torrence@NO-SPAM.yahoo.com> wrote in message news:10erieidmldig88@corp.supernews.com...
> Hi Emmanuel and Bob,
>
> Can you tell me your IDL version and platform? And also whether you have
> multiple CPUs on your machine? The following IDL commands should give this
> information:
...
> -Chris Torrence
> Research Systems, Inc.

Hi Chris,
I have not come across any other cases that have failed.
Here is the info from my system (Dell Inspirion 8100 - Laptop):
IDL> print,!version

{ x86 Win32 Windows Microsoft Windows 6.0 Jun 27 2003 32 64}

IDL> help, !cpu, /struct

** Structure !CPU, 6 tags, length=24, data length=24:

HW_VECTOR LONG 0

VECTOR_ENABLE LONG 0

HW_NCPU LONG 1

TPOOL_NTHREADS LONG 1

TPOOL_MIN_ELTS LONG 100000

TPOOL_MAX_ELTS LONG 0

-bob stockwell