
Subject: Re: Bug in IDL's TIMEGEN function
Posted by [David Fanning](#) on Fri, 24 Aug 2007 21:24:41 GMT
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Dave Wuertz writes:

```
> I found a bug in IDL's TIMEGEN function. It really nailed me good, as I
> was using the (erroneous) results from TIMEGEN to compute direct-access
> locations within database files.
>
> First off, I'm running IDL v6.4 on a 32-bit Linux-Intel box.
>
> TIMEGEN returns an incorrect sequence of julian dates when STEP_SIZE=-1,
> and UNITS="Months" when crossing year boundaries as demonstrated in
> the simple example below. Note the results should be monotonically
> decreasing.
>
> IDL> MyTimes = TIMEGEN( units="Months", step_size=-1,
> start=julday(1,15,2007), final=julday(10,15,2006))
> IDL> print, MyTimes - MyTimes(0)
>      0.0000000  -396.00000  -61.000000  -92.000000
```

Yeah, I'd say that was a bug. I'm using the 32-bit version of Windows.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: Bug in IDL's TIMEGEN function
Posted by [chris_torrence@NOSPAM](#) on Fri, 24 Aug 2007 22:19:00 GMT
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Hi Dave,

Good catch! This is indeed a bug. I've just fixed the code for the next IDL release.

If you want, you can patch your copy of timegen. Go to your \$IDL_DIR/lib/timegen.pro.

Around line 400, replace the following bad lines:

```
monthArray = (monthArray MOD 12) + 1
```

```
IF (step_size LT 0) THEN monthArray = (monthArray + 12) MOD 12
```

With the following good lines:

```
if (step_size ge 0) then begin
  monthArray = (monthArray mod 12) + 1
endif else begin
  monthArray = (((monthArray mod 12) + 12) mod 12) + 1
endelse
```

Using this version, I get the following results:

```
IDL> MyTimes = TIMEGEN( units="Months", step_size=-1, $
IDL> start=julday(1,15,2007), final=julday(10,15,2006))
IDL> print, MyTimes - MyTimes(0)
    0.00000000    -31.000000    -61.000000    -92.000000
```

Hope this didn't cause you too many problems.

Cheers,

Chris Torrence
ITT Visual Information Solutions

Subject: Re: Bug in IDL's TIMEGEN function
Posted by [R.G.Stockwell](#) on Mon, 27 Aug 2007 16:41:49 GMT
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"chris_torrence@NOSPAMyahoo.com" <gorthmog@gmail.com> wrote in message
news:1187993940.201423.291250@r23g2000prd.googlegroups.com.. .

...

```
> If you want, you can patch your copy of timegen. Go to your $IDL_DIR/
> lib/timegen.pro.
> Around line 400, replace the following bad lines:
>   monthArray = (monthArray MOD 12) + 1
>   IF (step_size LT 0) THEN monthArray = (monthArray + 12) MOD 12
> With the following good lines:
>   if (step_size ge 0) then begin
>     monthArray = (monthArray mod 12) + 1
>   endif else begin
>     monthArray = (((monthArray mod 12) + 12) mod 12) + 1
>   endelse
```

Thanks for the fast fix Chris!

cheers,
bob

Subject: Re: Bug in IDL's TIMEGEN function
Posted by [Dave Wuertz](#) on Mon, 27 Aug 2007 17:01:06 GMT

chris_torrence@NOSPAMyahoo.com said the following on 8/24/2007 6:19 PM:

```
> Hi Dave,
>
> Good catch! This is indeed a bug. I've just fixed the code for the
> next IDL release.
>
> If you want, you can patch your copy of timegen. Go to your $IDL_DIR/
> lib/timegen.pro.
> Around line 400, replace the following bad lines:
>   monthArray = (monthArray MOD 12) + 1
>   IF (step_size LT 0) THEN monthArray = (monthArray + 12) MOD 12
> With the following good lines:
>   if (step_size ge 0) then begin
>     monthArray = (monthArray mod 12) + 1
>   endif else begin
>     monthArray = (((monthArray mod 12) + 12) mod 12) + 1
>   endelse
>
> Using this version, I get the following results:
> IDL> MyTimes = TIMEGEN( units="Months", step_size=-1, $
> IDL> start=julday(1,15,2007), final=julday(10,15,2006))
> IDL> print, MyTimes - MyTimes(0)
>   0.00000000   -31.000000   -61.000000   -92.000000
>
> Hope this didn't cause you too many problems.
> Cheers,
>
> Chris Torrence
> ITT Visual Information Solutions
>
```

Thank you, Chris, for jumping on this and providing a patch so quickly!

Thanks also to David Fanning for testing the behavior on his platform.

-Dave Wuertz
