Subject: Re: sky is falling, again ?
Posted by Norbert Hahn on Wed, 16 Mar 2011 14:54:00 GMT
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nata <bernat.puigdomenech@gmail.com> wrote:

> Hi folks,
>
> I'm converting julian dates to text, using the calendar format. So,
> for example:
> time_text=2455636.937500d
>
> PRINT, STRING(time_text,FORMAT='(C(CDI2.2,"/",CMOI2.2,"/",CYI,"
> ",CHI2.2,":",CMI2.2))')
>
> CALDAT, time_text, mo, dd, yy, hh, mm
> PRINT, STRTRIM(dd,2)+"/"+STRTRIM(mo,2)+"/"+STRTRIM(yy,2)+"
> "+STRTRIM(hh,2)+":"+STRTRIM(mm,2)
>
> 16/03/2011 10:29
> 16/03/2011 10:30
>
> Lol ! There is 1 minute difference !!!! Do you know why ?

If you use
PRINT, STRING(time_text,FORMAT='(C(CDI2.2,"/",CMOI2.2,"/",CYI,"
",CHI2.2,":",CMI2.2,":",CSI2.2))')
to print time_text
you'll get
16/03/2011 10:29:59
with the number of milliseconds missing. But you are close to
the next minute.
As usual with quantized values, the last digit may be wrong.

Norbert

Subject: Re: sky is falling, again ?
Posted by Fabzou on Wed, 16 Mar 2011 16:52:48 GMT
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On 03/16/2011 03:54 PM, Norbert Hahn wrote:
> nata<bernat.puigdomenech@gmail.com> wrote:
>
> with the number of milliseconds missing. But you are close to
> the next minute.
> As usual with quantized values, the last digit may be wrong.
>

> Norbert

Because of this problem, we now defined our own time system based on "milliseconds since ..." (working with LONG64 formats to be sure). It works nice, but it was a long (and a bit boring) work to make it flexible and stable.

I was wondering what are you people doing?

Fab

Subject: Re: sky is falling, again ?
Posted by Kenneth P. Bowman on Wed, 16 Mar 2011 17:06:55 GMT
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In article <8uc870F5jqU1@mid.dfncis.de>,
Fabzou <fabien.maussion@tu-berlin.de> wrote:

> On 03/16/2011 03:54 PM, Norbert Hahn wrote:
>> nata<bernat.puigdomenech@gmail.com> wrote:
>>
>> with the number of milliseconds missing. But you are close to
>> the next minute.
>> As usual with quantized values, the last digit may be wrong.
>>
>> Norbert
>
> Because of this problem, we now defined our own time system based on
> "milliseconds since ..." (working with LONG64 formats to be sure). It
> works nice, but it was a long (and a bit boring) work to make it
> flexible and stable.
>
> I was wondering what are you people doing?
>
> Fab

I have a small library to do date and time calculations that are exact to the second using structures and integer arithmetic. It could be modified to add a millisecond or microsecond field.

You can download it here

http://idl.tamu.edu/idl/Downloads.html

(see bowman_lib.zip)

Ken Bowman

```
IDL> date1 = MAKE_DATE(2011, 3, 16, 12, 4, 0)
IDL> date2 = MAKE_DATE(2011, 3, 17, 12, 4, 0)
IDL> print, TIME_DIFF(date2, date1)
          86400
IDL> print, MAKE_ISO_DATE_STRING(date1)
2011-03-16 12:04:00
IDL>
```

Subject: Re: sky is falling, again ?
Posted by R.Bauer on Wed, 16 Mar 2011 17:38:46 GMT
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Am 16.03.2011 17:52, schrieb Fabzou:
>
> On 03/16/2011 03:54 PM, Norbert Hahn wrote:
>> nata<bernat.puigdomenech@gmail.com> wrote:
>>
>> with the number of milliseconds missing. But you are close to
>> the next minute.
>> As usual with quantized values, the last digit may be wrong.
>>
>> Norbert
>
> Because of this problem, we now defined our own time system based on
> "milliseconds since ..." (working with LONG64 formats to be sure). It
> works nice, but it was a long (and a bit boring) work to make it
> flexible and stable.
>
> I was wondering what are you people doing?
>

We use julian seconds, defined as "seconds since 2000-01-01 00:00:00" by
Ray Sterner (JHUAPL). It is a double precision number.

Works very well. We also have timeaxis, setup_time_axis routines and
lots of conversion routines in our library.

Reimar

Subject: Re: sky is falling, again ?
Posted by Fabzou on Wed, 16 Mar 2011 17:53:27 GMT
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On 03/16/2011 06:06 PM, Kenneth P. Bowman wrote:

>> Because of this problem, we now defined our own time system based on
>> "milliseconds since ..." (working with LONG64 formats to be sure). It
>> works nice, but it was a long (and a bit boring) work to make it
>> flexible and stable.
>>
>> I was wondering what are you people doing?
>>
>> Fab
>
> I have a small library to do date and time calculations that are
> exact to the second using structures and integer arithmetic. It
> could be modified to add a millisecond or microsecond field.
>
> You can download it here
>
> http://idl.tamu.edu/idl/Downloads.html
>
> (see bowman_lib.zip)
>
> Ken Bowman
>
>
>
> IDL> date1 = MAKE_DATE(2011, 3, 16, 12, 4, 0)
> IDL> date2 = MAKE_DATE(2011, 3, 17, 12, 4, 0)
> IDL> print, TIME_DIFF(date2, date1)
> 86400
> IDL> print, MAKE_ISO_DATE_STRING(date1)
> 2011-03-16 12:04:00
> IDL>

Yeah, once again I re-did something that already exists thousands of
time ;-)
Reading this newsgroup regularly, I learned the most important thing
ever: "first look if someone didn't do it for you"

Nice community, by the way...

Fab

Subject: Re: sky is falling, again ?
Posted by natha on Wed, 16 Mar 2011 18:25:01 GMT
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Thank you for all of these replies.

Now, I know where I have the problem...
My julian date is exactly what I want. The problem is when I convert
the date to local time.

I am doing something like: julian_time+=(SYSTIME(/UTC,/JUL)-SYSTIME(/
JUL))
The problem is this line. If I use the calendar format, sometimes
works, sometimes not.

nata
