# Subject: Error in function js2ymds (JHU/APL/S1R IDL Lib)? Posted by Olaf Stetzer on Thu, 13 Sep 2001 16:44:56 GMT

View Forum Message <> Reply to Message

Hello,

as mentioned in my last posting I want to convert Date/Time from Microsoft(Excel)-Format (based on 1.1.1900= day 1) into Julian Seconds and then from JS into the ODBC-SQL-TIMESTAMP-struct.

For the last conversion I've written a function which basically runs js2ymds to get the values for y m d and then computes hh mm ss from the resulting seconds.

All values are then stored in the aforementioned struct.

I now tried to compute the js from MS-Format and then use my function to store this in the sqlstruct:

\_\_\_

function mstime2sqlts, msdate, mstime

jsdate=(msdate-1)\*86400d0-3155673600d0 js=mstime\*86400d0+jsdate sqlts=js2sqlts(js) return, sqlts

end

\_\_\_

However I realised that the dates which result from my computation differ from the ones that I get when I just change the format setting in Excel!

Some Examples:

msdate msdate (formatted) js2ymds

1 1900 1 1 1900 1 1 366 1900 12 31 1901 1 1 12481 1934 3 3 1934 3 4 36682 2000 6 5 2000 6 6

It seems that in the MS-year 1900 has 1 more day compared to the one calculated by js2ymds!! I don't know if the fault is in Microsoft Excel or in the function js2ymds but maybe in 1900 there was an extra switching day (german: Schalttag) which is

not calculated in the function?

Greetings,

Olaf

Dr. Olaf Stetzer Forschungszentrum Karlsruhe Institut fi ¿1/2r Meterologie und Klimaforschung Atmosph�rische Aerosole (IMK III) - http://imk-aida.fzk.de

Tel.: +49(0)7247-82-3249 (FAX: -4332)

Subject: Re: Error in function js2ymds (JHU/APL/S1R IDL Lib)? Posted by Harald Giese on Fri, 14 Sep 2001 00:09:46 GMT

View Forum Message <> Reply to Message

#### Olaf Stetzer wrote:

- > It seems that in the MS-year 1900 has 1 more day
- > compared to the one calculated by js2ymds!! I don't
- > know if the fault is in Microsoft Excel or in the
- > function js2ymds but maybe in 1900 there was an
- > extra switching day (german: Schalttag) which is
- > not calculated in the function?

Hi Olaf,

MS-Excel has indeed two peculiarities (at least):

- 1. it counts the 01.01.1900 00:00 as Julian day 1.0 (where most of us would expect 0.0)
- 2. it has a "29.02.1900" though 1900 was definitely not a leap year

Happy coding!

Regards. Harald

Subject: Re: Error in function js2ymds (JHU/APL/S1R IDL Lib)? Posted by Olaf Stetzer on Fri, 14 Sep 2001 07:06:44 GMT

View Forum Message <> Reply to Message

Harald Giese schrieb:

> Olaf Stetzer wrote:
>> ...
>> It seems that in the MS-year 1900 has 1 more day
>> compared to the one calculated by js2ymds!! I don't
>> know if the fault is in Microsoft Excel or in the
>> function js2ymds but maybe in 1900 there was an
>> extra switching day (german: Schalttag) which is
>> not calculated in the function?
>
> Hi Olaf,
>
> MS-Excel has indeed two peculiarities (at least):
>
> 1. it counts the 01.01.1900 00:00 as Julian day 1.0 (where most of us
> would expect 0.0)
> 2. it has a "29.02.1900" - though 1900 was definitely not a leap year

\*ROTFLOL\* !!!!!! I first thought about this possibility but did not belive that MS can make such a silly mistake!!!! But in the end it just supports my image of this \$\$ company.... Do they know about this and what is their official reaction? Let me guess.... They try to redefine the calendar so their calcualtions are correct (you know the joke about MS-engineers trying to repair a broken light bulb?)

.

MS redefined darkness as new standard!!!

Greetings,

Olaf

--

Dr. Olaf Stetzer Forschungszentrum Karlsruhe Institut f�r Meterologie und Klimaforschung Atmosph�rische Aerosole (IMK III) - http://imk-aida.fzk.de

Tel.: +49(0)7247-82-3249 (FAX: -4332)

Subject: Re: Error in function js2ymds (JHU/APL/S1R IDL Lib)? Posted by R.Bauer on Fri, 14 Sep 2001 07:34:50 GMT

View Forum Message <> Reply to Message

Harald Giese wrote:

```
> Olaf Stetzer wrote:
>> ...
>> It seems that in the MS-year 1900 has 1 more day
>> compared to the one calculated by js2ymds!! I don't
>> know if the fault is in Microsoft Excel or in the
>> function is2ymds but maybe in 1900 there was an
>> extra switching day (german: Schalttag) which is
>> not calculated in the function?
>
> Hi Olaf,
> MS-Excel has indeed two peculiarities (at least):
>
> 1. it counts the 01.01.1900 00:00 as Julian day 1.0 (where most of us
> would expect 0.0)
> 2. it has a "29.02.1900" - though 1900 was definitely not a leap year
> Happy coding!
> Regards,
> Harald
```

I have seen this problems by storing data with labview too. It seems to me

that it comes from the Microft Windows.

I haven't tried to program a fix around this, because our exchange format

from Labview to IDL is an ASCII file format named ENZ.

In this file format we are able to set a start date then only seconds of day

have to be stored. Later on the read\_enz() routine translates the date seconds

information correctly in julian seconds. Result is the ICG data structure.

Some more words about ENZ.

Normally data is a bit more as only values.

You like to know the units, the long name (for printouts), the missing value,

the short name of the data probably a scaling factor or an offset as well as who did the experiment and why and where and which resources are used and some more.

Our data is always described in the data files.

This information is defined as GLOBAL comments and PARAMETER comments.

HDF, netCDF handles this informtion the same way. ENZ is specially for vector data and we are using it for Experiments if we like or need ASCII data for exchange.

regards

Reimar

--

Reimar Bauer

Institut fuer Stratosphaerische Chemie (ICG-1) Forschungszentrum Juelich email: R.Bauer@fz-juelich.de http://www.fz-juelich.de/icg/icg1/

\_\_\_\_\_\_

a IDL library at ForschungsZentrum Juelich http://www.fz-juelich.de/icg/icg1/idl\_icglib/idl\_lib\_intro.h tml

http://www.fz-juelich.de/zb/text/publikation/juel3786.html

\_\_\_\_\_\_

read something about linux / windows http://www.suse.de/de/news/hotnews/MS.html

Subject: Re: Error in function js2ymds (JHU/APL/S1R IDL Lib)? Posted by R.Bauer on Fri, 14 Sep 2001 08:58:23 GMT

View Forum Message <> Reply to Message

#### Olaf Stetzer wrote:

>

> Hello,

\_

- > as mentioned in my last posting I want to convert
- > Date/Time from Microsoft(Excel)-Format (based on
- > 1.1.1900= day 1) into Julian Seconds and then from JS
- > into the ODBC-SQL-TIMESTAMP-struct.

>

- > For the last conversion I've written a function
- > which basically runs js2ymds to get the values
- > for y m d and then computes hh mm ss from the
- > resulting seconds.

>

> All values are then stored in the aforementioned struct.

>

read something about linux / windows http://www.suse.de/de/news/hotnews/MS.html	
http://www.fz-juelich.de/zb/text/publikation/juel3786.html	
a IDL library at ForschungsZentrum Juelich http://www.fz-juelich.de/icg/icg1/idl_icglib/idl_lib_intro.h tml	
Institut fuer Stratosphaerische Chemie (ICG-1) Forschungszentrum Juelich email: R.Bauer@fz-juelich.de http://www.fz-juelich.de/icg/icg1/	
 Reimar Bauer	
Reimar	
regards	
http://www.fz-juelich.de/icg/icg1/idl_icglib/idl_source/idl_ html/dbase/download/xls2js.tar.gz	
js_time= mstime*24d*3600+xls2js(msdates)	
We are calculating the jstime from Microsoft special time in this way	
Dear Olaf,	
> end >	
<pre>&gt; jsdate=(msdate-1)*86400d0-3155673600d0 &gt; js=mstime*86400d0+jsdate &gt; sqlts=js2sqlts(js) &gt; return, sqlts &gt;</pre>	
> > function mstime2sqlts, msdate, mstime >	
<ul><li>I now tried to compute the js from MS-Format and then</li><li>use my function to store this in the sqlstruct:</li></ul>	

## Subject: Re: Error in function js2ymds (JHU/APL/S1R IDL Lib)? Posted by Olaf Stetzer on Fri, 14 Sep 2001 09:10:04 GMT

View Forum Message <> Reply to Message

### Reimar Bauer schrieb: Dear Olaf, > > We are calculating the istime from Microsoft special time in this way js\_time= mstime\*24d\*3600+xls2js(msdates) Hello Reimar, I just changed my code to: function mstime2sqlts, msdatetime return, js2sqlts((msdatetime-36526d0)\*86400d0) end assuming that msdatetime is the result of mstime+msdate. 36526 is the MS-date for 1.1.2000! I know that this shifts the problem only to dates prior to 1.3.1900 but for the moment thats OK. I will have a look at your suggestion soon! Olaf Dr. Olaf Stetzer Forschungszentrum Karlsruhe Institut fi ¿1/2r Meterologie und Klimaforschung Atmosph�rische Aerosole (IMK III) - http://imk-aida.fzk.de Tel.: +49(0)7247-82-3249 (FAX: -4332)

Subject: Re: Error in function js2ymds (JHU/APL/S1R IDL Lib)? Posted by Olaf Stetzer on Fri, 14 Sep 2001 09:18:40 GMT

View Forum Message <> Reply to Message

```
Reimar Bauer schrieb:

> Olaf Stetzer wrote:

>>

>> Hello,

>>

>> as mentioned in my last posting I want to convert
```

>> Date/Time from Microsoft(Excel)-Format (based on >> 1.1.1900= day 1) into Julian Seconds and then from JS >> into the ODBC-SQL-TIMESTAMP-struct. >> >> For the last conversion I've written a function >> which basically runs js2ymds to get the values >> for y m d and then computes hh mm ss from the >> resulting seconds. >> >> All values are then stored in the aforementioned struct. >> >> I now tried to compute the js from MS-Format and then >> use my function to store this in the sqlstruct: >> function mstime2sqlts, msdate, mstime >> >> jsdate=(msdate-1)\*86400d0-3155673600d0 >> js=mstime\*86400d0+jsdate >> sqlts=js2sqlts(js) >> return, sqlts >> >> end >> ---> Dear Olaf, > > We are calculating the jstime from Microsoft special time in this way > js time= mstime\*24d\*3600+xls2js(msdates) Are you sure that this function is aware of the 29.2.1900-bug in ms-date? By looking at the code for xls2js I am not sure about this! Olaf Dr. Olaf Stetzer Forschungszentrum Karlsruhe Institut fi¿1/2r Meterologie und Klimaforschung Atmosph�rische Aerosole (IMK III) - http://imk-aida.fzk.de

Subject: Re: Error in function js2ymds (JHU/APL/S1R IDL Lib)? Posted by Olaf Stetzer on Fri, 14 Sep 2001 09:39:04 GMT

View Forum Message <> Reply to Message

Tel.: +49(0)7247-82-3249 (FAX: -4332)

- > function mstime2sqlts, msdatetime > return, js2sqlts((msdatetime-36526d0)\*86400d0) > end Changed to: function mstime2sqlts, msdatetime if floor(msdatetime) eq 60 then begin print, 'WARNING!' print, 'You tried to convert a date with value 60' print, 'which corresponds to 29.2.1900 according' print, ' to Micro\$oft! However this date does not' print, 'exist and is converted to 1.3.1900!' end if msdatetime It 61 then msdatetime=msdatetime+1 return, js2sqlts((msdatetime-36526d0)\*86400d0) end Now i feel much better!!! :-) Olaf
- Dr. Olaf Stetzer
  Forschungszentrum Karlsruhe
  Institut f�r Meterologie und Klimaforschung
  Atmosph�rische Aerosole (IMK III) http://imk-aida.fzk.de
  Tel.: +49(0)7247-82-3249 (FAX: -4332)

Subject: Re: Error in function js2ymds (JHU/APL/S1R IDL Lib)? Posted by R.Bauer on Fri, 14 Sep 2001 10:14:14 GMT View Forum Message <> Reply to Message

```
Olaf Stetzer wrote:

> Reimar Bauer schrieb:

>> Olaf Stetzer wrote:

>>> Hello,

>>> as mentioned in my last posting I want to convert

>>> Date/Time from Microsoft(Excel)-Format (based on

>>> 1.1.1900= day 1) into Julian Seconds and then from JS
```

```
>>> into the ODBC-SQL-TIMESTAMP-struct.
>>>
>>> For the last conversion I've written a function
>>> which basically runs js2ymds to get the values
>>> for y m d and then computes hh mm ss from the
>>> resulting seconds.
>>>
>>> All values are then stored in the aforementioned struct.
>>>
>>> I now tried to compute the js from MS-Format and then
>>> use my function to store this in the sqlstruct:
>>> function mstime2sqlts, msdate, mstime
>>>
>>> jsdate=(msdate-1)*86400d0-3155673600d0
>>> js=mstime*86400d0+jsdate
>>> sqlts=js2sqlts(js)
>>> return, sqlts
>>>
>>> end
>>> ---
>>
>> Dear Olaf,
>>
>> We are calculating the jstime from Microsoft special time in this way
>>
>> js_time= mstime*24d*3600+xls2js(msdates)
>
> Are you sure that this function is aware of the 29.2.1900-bug in
  ms-date? By looking at the code for xls2js I am not sure about this!
>
> Olaf
I have tested it with some of your data and I got the right days back.
And the routine is tested since 1998 many time by others too.
Reimar
Reimar Bauer
Institut fuer Stratosphaerische Chemie (ICG-1)
Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de
http://www.fz-juelich.de/icg/icg1/
```

a IDL library at ForschungsZentrum Juelich

http://www.fz-juelich.de/icg/icg1/idl_icglib/idl_lib_intro.h tml
http://www.fz-juelich.de/zb/text/publikation/juel3786.html
read something about linux / windows http://www.suse.de/de/news/hotnews/MS.html