Subject: Re: JULDAY trivia
Posted by Jeffrey Jones on Wed, 28 Mar 2001 02:45:40 GMT
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In article <27032001134540905 2%k-bowman@null.tamu.edu>,
"K. Bowman" <k-bowman@null.tamu.edu> wrote:

> I've been updating some of my own date and time routines and found
> myself perusing the JULDAY man page. As an example, the man page gives
> Julian day numbers bracketing the period when the changeover from the
> Julian to Gregorian calendar was carried out:
>
> PRINT, JULDAY(10,4,1582), JULDAY(10,5,1582), JULDAY(10,15,1582)
>
> 2299160 2299161 2299161
>
> If I understand correctly, October 5-14 of 1582 never existed. JULDAY,
> howver, gives the following:
>

[snip]

I don't think it is accurate to say "October 5-14 of 1582 never existed." All that happened was that catholic Europe switched to using a different calendar. Those days existed on both calendars -- they were just different days.

Oct 5, 1582 Julian = Oct 15, 1582 Gregorian

The Julian calendar continued counting days consecutively, and was used in much of the world well beyond 1582 -- the English speaking world didn't switch until September 1752.

Clearly, what JULDAY is doing is interpreting any date before Oct 15, 1582 as Julian calendar, any date Oct 15, 1582 or later is considered to be Gregorian. Similarly, CALDAT returns a Julian calendar date if the input value is less than 2299161, and a Gregorian date otherwise. From this point of view, the behavior is logical and consistent. There is no reason to choke.

If you were using dates from 1582 you would need to be very careful about the calendar. If you had historic documents from the 17th century, for example, you would need to know what calendar the author was using, since not everyone switched in 1582.

Jeff

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Jeff

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