
Subject: Re: JULDAY-CALDAT problem

Posted by [Paul Van Delst\[1\]](#) on Fri, 27 Feb 2004 16:06:57 GMT

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Luciano wrote:

- >
- > Thanks David and Ben for your help. I've solved the problem by not
- > using Julday and Caldat...
- > David, if for the computer $0=10^{-5}$ then is not me who has to start
- > counting like a computer, it should be the other way around :)
- >
- > This is simply wrong and should be fixed at some level! I understand
- > all the hardware, 0s and 1s, significant figures and related problems
- > described in your "Help! The Sky is Falling!" section. But... don't
- > you think this should be fixed somehow?
- >
- > If you ask me, 0 should be 0, and the computer should be able to know
- > it...

0 is 0 on a computer. A number like 0.0 can, typically, be represented exactly. Same goes for numbers like 1.0 or 2.0. When you start using 0.1's or 3.1415927's things get sticky. And, when you start repeatedly adding and subtracting the sticky numbers that *can't* be represented exactly, then the numeric precision issues crop up.

Having said all that, I hear you. It would be nice if the way we thought about these sorts of problems was also how a computer handles them. When confronted with this sort of situation, e.g. "the computer should be able to know", I just remember that a computer has zero (exactly :o) intelligence. All the know-how and mistakes come from us.

cheers,

paulv

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