Subject: Re: Comparing 2 arrays
Posted by Allan Whiteford on Wed, 29 Aug 2007 08:04:27 GMT
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David Fanning wrote:
> Jean H. writes:
>
>
>> to get back to a previous discussion we had a few month ago about being
>> "sufficiently close to zero", shouldn't it be (data1.A - data2.B) LT
>> epsilon * data1.A , with epsilon=(machar()).eps?
>
>
> OK, I found that discussion and read it eight or ten times until
> I finally understood it. (Probably why I forgot it before.)
>
> I've put a significantly edited discussion of this
> problem here:
>
> http://www.dfanning.com/code_tips/comparearray.html
>
> In my preferred solution now, I choose a number that
> is "sufficiently close" to zero like this:
>
> epsilon = (MACHAR()).eps
> NUMBER = (array_1 > array_2) * epsilon
>
> Then, the comparison between arrays is done like this:
>
> IF Total(Abs(array_1 - array_2) LT NUMBER) EQ N_Elements(array_1) $
> THEN RETURN, 1 ELSE RETURN, 0
>
> Additional comments welcome if you want to argue further. :-)
>
> Cheers,
>
> David

David,

Not sure about this point but wouldn't:

NUMBER = (abs(array_1) > abs(array_2)) * epsilon

make more sense?

Certainly it would make more sense to me in terms of both dealing with
the comparison of two negative numbers (in this case NUMBER will end up

being negative which can't be good!) or even when comparing a small positive number with a large negative number.

Thanks,

Allan
