Subject: Re: Arrays with NaN values
Posted by David Fanning on Sun, 03 Oct 2004 06:30:02 GMT
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Julio writes:

> I need to manipulate arrays with some NaN values inside. How can I put
> zero values in the place of the NaN values??

Here is an article that describes how to find them, so
you can change them:

http://www.dfanning.com/tips/check_nan.html

Cheers,

David

--
David W. Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http:/www.dfanning.com/
Phone: 970-221-0438, IDL Book Orders: 1-888-461-0155

Subject: Re: Arrays with NaN values
Posted by julio on Sun, 03 Oct 2004 20:36:50 GMT
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Ok, David, but I'm using this code to put zeros in the place of Nan

Image=(0*(where(float(finite Image[*,*],/Nan)))) + $
Image*(where(NOT float(finite *Image[*,*],/Nan))))

I guess I'm not using "where" function correctly, once it doesn't
work.
What could be the problem? I must retain the array size, I just need
to change Nan for zeros or other value.

Regards,
Julio

David Fanning <david@dfanning.com> wrote in message
news:<MPG.1bc94a59bb2414b998968f@news.frii.com>...
> Julio writes:
>
>> I need to manipulate arrays with some NaN values inside. How can I put

>> zero values in the place of the NaN values??
>
> Here is an article that describes how to find them, so
> you can change them:
>
> http://www.dfanning.com/tips/check_nan.html
>
> Cheers,
>
> David

Subject: Re: Arrays with NaN values
Posted by David Fanning on Mon, 04 Oct 2004 05:22:53 GMT
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Julio writes:

> Ok, David, but I'm using this code to put zeros in the place of Nan
>
> Image=(0*(where(float(finite Image[*,*],/Nan)))) + $
> Image*(where(NOT float(finite *Image[*,*],/Nan))))
>
> I guess I'm not using "where" function correctly, once it doesn't
> work.

Humm. Well that code looks a little strange. :-)

I think I would try something like this:

```
index = Where(Finite(image) EQ 0, count)
IF count NE 0 THEN image[index] = 0
```

Cheers,

David

--
David W. Fanning, Ph.D.
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Subject: Re: Arrays with NaN values
Posted by julio on Mon, 04 Oct 2004 17:08:19 GMT
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Man, your code worked fine!
Very simple, very efficient...

Thanks
Julio

David Fanning <david@dfanning.com> wrote in message
news:<MPG.1bca8c1aa16488e5989691@news.frii.com>...
> Julio writes:
>
>> Ok, David, but I'm using this code to put zeros in the place of Nan
>>
>> Image=(0*(where(float(finite Image[*,*],/Nan)))) + $
>> Image*(where(NOT float(finite *Image[*,*],/Nan))))
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>> I guess I'm not using "where" function correctly, once it doesn't
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> Humm. Well that code looks a little strange. :-)
>
> I think I would try something like this:
>
>   index = Where(Finite(image) EQ 0, count)
>   IF count NE 0 THEN image[index] = 0
>
> Cheers,
>
> David

Subject: Re: Arrays with NaN values
Posted by David Fanning on Mon, 04 Oct 2004 20:35:55 GMT
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Julio writes:

> Man, your code worked fine!
> Very simple, very efficient...

Well, it has taken my years to learn to program in the
IDL Way. :-)

Cheers,

David

--
David W. Fanning, Ph.D.

Fanning Software Consulting, Inc.
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Subject: Re: Arrays with NaN values
Posted by Mark Hadfield on Mon, 04 Oct 2004 23:58:55 GMT
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David Fanning wrote:
>
> I think I would try something like this:
>
> index = Where(Finite(image) EQ 0, count)
> IF count NE 0 THEN image[index] = 0

Note that the first line could *not* be replaced by the (apparently reasonable)

index = Where(NOT Finite(image), count)

because the NOT operator and the WHERE function do not play well together. The reasons are explained here:

http://www.dfanning.com/code_tips/bitwiselogical.html

In IDL 6.0 the logical not operator, "~" operator was introduced to avoid this problem, so the following would work

index = Where(~Finite(image), count)

--
Mark Hadfield "Ka puwaha te tai nei, Hoea tatou"
m.hadfield@niwa.co.nz
National Institute for Water and Atmospheric Research (NIWA)

Subject: Re: Arrays with NaN values
Posted by Paul Van Delst[1] on Tue, 05 Oct 2004 16:13:23 GMT
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Mark Hadfield wrote:
> David Fanning wrote:
>
>>
>> I think I would try something like this:
>>

>>   index = Where(Finite(image) EQ 0, count)
>>   IF count NE 0 THEN image[index] = 0
>
>
> Note that the first line could *not* be replaced by the (apparently
> reasonable)
>
>   index = Where(NOT Finite(image), count)
>
> because the NOT operator and the WHERE function do not play well
> together. The reasons are explained here:
>
>   http://www.dfanning.com/code_tips/bitwiselogical.html
>
> In IDL 6.0 the logical not operator, "~" operator was introduced to
> avoid this problem,

Man, the C-loving types really did a number on IDL. RSI musta hired a boatload of CS grads from the same school or something to implement the OO stuff. :o) [and, just in case anyone is irony impaired, yes, I am kidding]

> so the following would work
>
>   index = Where(~Finite(image), count)

I realise "~" is a complement operator but when I look at the code above, I think "where the elements of IMAGE are *approximately* finite" ..... huh?

Gosh, I have that old'n'crusty feeling coming on again. Back to DF's blog for some restorative therapy.....

paulv
