
Subject: Re: Bad data in structure (NaN HowTo?)

Posted by [Martin Schultz](#) on Thu, 23 Nov 2000 08:00:00 GMT

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Randall Skelton wrote:

>
> I have an array of large structures which occasionally is filled (via an
> external C program) and passed into IDL with -12345 signifying the data
> for that element is lost. I would like to convert the occurrences of
> -12345 to NaN's in IDL but I am a little perplexed on how to do this.
>
> I had hoped that since this is technically an 'array' (albeit an array of
> structures) I would just be able to use the 'where' command; alas, it
> appears that structures are not allowed in the where command:
>
> B = where(atrl eq -12345, count)
> % Struct expression not allowed in this context: ATRL.
>
> Each structure has about 450 elements in it and is comprised itself of
> strings, ints, floats and doubles and arrays of each of the above. My
> initial thought is to make an array of strings which represent the
> elements of the structure and loop over that array, searching for '-12345'
> in each element or array as I go. This seems rather inefficient. It
> would be much nicer if I could directly assign the structure element to
> NaN in C and pass it into IDL (and have IDL interpret the missing data as
> as NaN)? Oh yes, it would be nice if I could use the same C code on
> intel, PowerPC, and sparc architectures... Does anyone know how this
> might be done?
>
> Thanks for the help.
>
> Randall

How about including `if (value == -12345) value = value/0.` in your
C program. With the appropriate compiler flags you might be able to
catch the math error and then you surely have a NaN as result. I just
don't know if IDL uses the same representation for NaN as the C
compiler on all platforms. (if NaN is consistent on one platform but
different between platforms this shouldn't hurt).

Playing dirty ;-),
Martin

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