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Subject: Re: Would you consider this a bug?  
Posted by [Martin Schultz](#) on Fri, 02 Oct 1998 07:00:00 GMT  
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David Kastrup wrote:

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>
> Kevin Ivory <Kevin.Ivory@linmpi.mpg.de> writes:
>
>> Leaving the bug topic - switching to algorithms
>>
>> David Kastrup wrote:
>>> Unfortunately, translating something like
>>>
>>> a[[5,2,3,0,4,1]] = a
>>> into the equivalent
>>> a = a[[3,5,1,2,4,0]]
>>> is not easy to do in the general case.
>>
>> Actually it is: you need a second call to sort. See example below.
>>
>>> some data that needed to be processed in sorted order, the results
>>> needed to be rearranged in original order.
>>>
>>> Something like
>>> s = sort(a)
>>> a = a[s]
>>> process(a)
>> ; a[s] = a      ; I still think this a dangerous thing to do.
>> r = sort(s)
>> a = a[r]
>
> [netiquette comment cut]
>
> Second, I refuse to call a significantly time-consuming routine like
> "sort" (O(n log n)) twice without good reason. Especially when a
> simple workaround like writing
> a[s] = a+0
> will do the trick.
>
```

Although I really agree with Kevin in terms of the danger that lies in using some peculiarity of IDL (which makes it hard to understand a program, too), I must admit that there is a significant difference in execution speed if you can avoid the second sort command. For a 20000 floating point array ( `a=sin(findgen(20000)/360.*!PI)` ), I find execution times of 0.01xx vs 0.06xx secs if once compares (in Eric's 'terminology') `a[s]=a[*]` with `a=a[sort(s)]`. Well, this is definitively not worth risking anything. BUT if you go to 2M elements, the difference

becomes one between 2 secs and 22 secs, which does matter. In any case,  
as always: a nice comment in the program would help ;-)

Regards,  
Martin.

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