
Subject: Re: Cumulative max() in *arbitrary* dimension?
Posted by [Heinz Stege](#) on Sat, 10 Mar 2012 17:21:48 GMT
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First: On Fri, 09 Mar 2012 18:58:13 +0100, I wrote:

```
> for i=off,ns-off,off do a[i]=a[i-off:i-1]>a[i:i+off-1]
```

There is a mistake. It has to read:

```
for i=off,n_elements(a)-off,off do a[i]=a[i-off:i-1]>a[i:i+off-1]
```

Second: My contribution => my work. ;-) I measured the times for an array `a=byte(randomu(seed,60,400,3000),/long)`. I tested the following versions:

```
[1] i1=0 &i2=off-1 & $  
    for i=1,s[d]-1 do a[i*off]=a[i1:i2]>a[(i1+=off):(i2+=off)]  
[2] for i=1,s[d]-1 do $  
    a[i*off]=a[(i-1)*off:i*off-1]>a[i*off:(i+1)*off-1]  
[3] for i=off,n_elements(a)-off,off do a[i]=a[i-off:i-1]>a[i:i+off-1]
```

I ran each version 2000 times and found no significant differences in the run-time. There only seems to be a slight trend for [2] being the slowest. However it does not have any practical relevance. Here are the details:

```
[1] 134.3 (+/-0.2) ms (calculation of i1 and i2 included)  
[2] 134.9 (+/-0.2) ms  
[3] 134.2 (+/-0.2) ms
```

The given errors are statistical standard-errors ("1 sigma").

Heinz
