Subject: Array-making speed
Posted by btt on Fri, 29 Dec 2000 18:55:39 GMT
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Hello,

A (long) while back there was a discussion regarding which, of a number of methods, was most efficient at making a blank array. I couldn't locate the archive at DejaNews, so I tried to figure out which one to use by trial and error.

Below is the code I used to make an 640x480 zero-valued array with MAKE_ARRAY, INTARR and REPLICATE. I tried each in a loop, with the loop incrementing to 1, 10, 100 and finally 1000 times. The results are shown below; note how INTARR looks non-linear when the in the 100 count loop (I expected something between 0.16 and 0.17) . Loopy, huh? Just gee-whiz enough that I thought I'd share it.

```
IDL> arraymaking
** Structure !VERSION, 7 tags, length=44:
   ARCH            STRING    'PowerMac'
   OS              STRING    'MacOS'
   OS_FAMILY       STRING    'MacOS'
   RELEASE         STRING    '5.4'
   BUILD_DATE      STRING    'Nov  1 2000'
   MEMORY_BITS     INT             32
   FILE_OFFSET_BITS
                   INT       =       32
MakeArray x 1    0.0022699833
IntArr x 1    0.0016069412
Replicate x 1    0.0025990009

MakeArray x 10     0.023674965
IntArr x 10     0.016358972
Replicate x 10     0.023769975

MakeArray x 100      0.23571503
IntArr x 100      0.30677903
Replicate x 100      0.25714195

MakeArray x 1000       2.3778840
IntArr x 1000       1.7446461
Replicate x 1000       2.3371190


;---------------- START
PRO ArrayMaking
```

```
nx = 640
ny = 480

n = [1,10,100,1000]

Help, !Version, /str

For j = 0, 3 Do Begin

Start = SYSTIME(/Sec)
For i = 0, n[j]-1 Do D = MAKE_ARRAY(nx,ny,Value = 0)
Print, 'MakeArray x ',StrTrim(n[j],2), SYSTIME(/Sec)-Start

Start = SYSTIME(/Sec)
For i = 0, n[j]-1 Do D = IntArr(nx,ny)
Print, 'IntArr x ',StrTrim(n[j],2), SYSTIME(/Sec)-Start


Start = SYSTIME(/Sec)
For i = 0, n[j]-1 Do D = Replicate(0,nx,ny)
Print, 'Replicate x ',StrTrim(n[j],2), SYSTIME(/Sec)-Start

Print, ' '
EndFor ;j loop

END
;----------------END
```

Ben

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