

---

Subject: Re: Memory management  
Posted by [landsman](#) on Fri, 12 Jun 1992 14:56:00 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

In article <12JUN199209141539@stars.gsfc.nasa.gov>, isaacman@stars.gsfc.nasa.gov (Subvert the Dominant Paradigm! (301) 513-7769) writes...

> There seems to be some peculiarity in the way IDL does its memory  
> management in the TRANSPOSE function. Running on a VAXstation 3100/76,  
> the following statements cause the process to hang:

```
>  
> IDL> A = FINDGEN(3,200000)  
> IDL> A = TRANSPOSE(A)
```

> The problem can be made to disappear as the array size is made smaller,  
> presumably depending on one's page file quota and so forth. (On our  
> system, using A = FINDGEN(3,100000) works fine.)

I also have problems using TRANSPOSE with a 3 by 200000 array on both SUN V2.3.1 and VAX V2.2.2. (Note that TRANSPOSE works properly for much larger arrays if they are closer to being square, so, as Rich noted, the problem is not one of simple virtual memory limits.)

Presumably, TRANSPOSE has been optimized for a near square array, but the code should be fixed up so that it doesn't hang up an IDL session.

Meanwhile, the following IDL code accomplishes the TRANSPOSE fairly quickly:

```
a = findgen(3,200000)  
b = fltarr(200000,3,/nozero)  
for i=0,2 do b(0,i) = REFORM(a(i,*))
```

\*\*\*\*\*

Wayne Landsman  
landsman@stars.gsfc.nasa.gov

---

---

Subject: Re: Memory management  
Posted by [isaacman](#) on Fri, 12 Jun 1992 19:29:00 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

In article <12JUN199210563303@stars.gsfc.nasa.gov>, landsman@stars.gsfc.nasa.gov (Wayne Landsman (301)-286-3625) writes...

> In article <12JUN199209141539@stars.gsfc.nasa.gov>, isaacman@stars.gsfc.nasa.gov  
(Subvert the Dominant Paradigm! (301) 513-7769) writes...

>> There seems to be some peculiarity in the way IDL does its memory  
>> management in the TRANSPOSE function. Running on a VAXstation 3100/76,  
>> the following statements cause the process to hang:

```
>>
>> IDL> A = FINDGEN(3,200000)
>> IDL> A = TRANSPOSE(A)
>>
>> The problem can be made to disappear as the array size is made smaller,
>> presumably depending on one's page file quota and so forth. (On our
>> system, using A = FINDGEN(3,100000) works fine.)
>>
>> Rich Isaacman
>> COBE Project
>> NASA/Goddard Space Flight Center
>>
>
> I also have problems using TRANSPOSE with a 3 by 200000 array on both SUN
> V2.3.1 and VAX V2.2.2. (Note that TRANSPOSE works properly for much larger
> arrays if they are closer to being square, so, as Rich noted, the problem is not
> one of simple virtual memory limits.)
> Presumably, TRANSPOSE has been optimized for a near square array, but the
> code should be fixed up so that it doesn't hang up an IDL session.
>
> Meanwhile, the following IDL code accomplishes the TRANSPOSE fairly quickly:
>
> a = findgen(3,200000)
> b = fltarr(200000,3,/nozero)
> for i=0,2 do b(0,i) = REFORM(a(i,*))
>
> *****
>
> Wayne Landsman
> landsman@stars.gsfc.nasa.gov
>
```

RSI has responded to my original posting and reported that there is indeed a bug in TRANSPOSE. The fix has been made and will be in the next release after Version 2.3. Wayne's hypothesis, it turns out, is correct: TRANSPOSE is optimized for a square array and will fall into an infinite loop if  $(\text{larger\_dimension} / \text{smaller\_dimension}) * \text{element\_size}$  is greater than 250 Kbytes.

Rich Isaacman

---