
Subject: Problems with the IDL TIME_TEST
Posted by [rsmith](#) on Thu, 11 Jul 1996 07:00:00 GMT
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Rick Shafer, my officemate here at NASA Goddard, was looking over the IDL benchmarks rather carefully recently, trying to make sure everything was kosher...and there seems to be a ham&cheese sandwich in there somewhere.

The problem is in the floating-point multiplies...here's the code, cut-n-pasted from the library, for the byte-multiplies and the floating:

```
....  
a=replicate(2b,512,512)  
reset  
for i=1,10 do b=a*2b  
timer,'Mult 512 by 512 byte by constant and store, 10 times'  
for i=1,100 do c = shift(b,10,10)  
timer,'Shift 512 by 512 byte and store, 100 times'  
for i=1,50 do b=a+3b  
timer,'Add constant to 512 x 512 byte array and store, 50 times'  
for i=1,30 do b=a+b  
timer,'Add two 512 by 512 byte images and store, 30 times'  
  
a = float(a)  
reset  
for i=1,30 do b=a*2b  
timer,'Mult 512 by 512 floating by constant and store, 30 times'  
for i=1,30 do c = shift(b,10,10) ; should be c = b + 2.0  
timer,'Add constant to 512 x 512 floating and store, 30 times'  
for i=1,30 do b=a+b  
timer,'Add two 512 by 512 floating images and store, 30 times'  
....
```

It looks to us as though RSI just copied the code, which is not correct, of course, for floating points. Changing the code slightly, as noted above, results in a change in the benchmark from 0.43 to 0.75, on my Dec Alpha, for an ~40% slowdown, in a fairly important benchmark.

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