Subject: Re: no backwards compatibility in IDL 5.6
Posted by Richard Younger on Thu, 27 Feb 2003 18:41:34 GMT
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William Thompson wrote:
>
> Evidently, the change in behavior was introduced in 5.5 or 5.5a.
[...]
> A better solution may be to separate out the real and imaginary parts, and
> pass them to ATAN separately, e.g.
>
> IDL> x = complex(3,4)
> IDL> print,atan(x) ;Under 5.4.1 or below
> 0.927295
> IDL> print,atan(imaginary(x),float(x))
> 0.927295
>
> Although you'd still have to worry about the distinction between single and
> double-precision complex numbers.

The behavior was changed in 5.5. It's slower and takes more memory to separate the complex and real parts out. See threads from ~6-8 months ago:

http://groups.google.com/groups?selm=on660zqax4.fsf%40cow.ph ysics.wisc.edu
http://groups.google.com/groups?selm=ony9b7s7vc.fsf%40cow.ph ysics.wisc.edu

5.5 (not coincidentally I think) was also when they introduced the REAL_PART() function, which returns float or double precision depending on the source. Of course, this wasn't in the online documentation, just in the printed update, which is a whole 'nother issue.

Even though the atan() change broke my code, slowed it down, and cost me time, I come down on the "terribly annoying" side rather than calling it "dangerous". I just made sure to test all my critical code before migrating fully to 5.5, and the slowdown only cost my minutes-long runtime a few seconds.

Fortunately, I only have to deal with old versions a little. I can imagine that people maintaining critical code for large department-fulls of licenses would be a little more grumpy about the change.

Best,
Rich Younger