Subject: Re: Floating point system variables on RS6000
Posted by zawodny on Tue, 24 Nov 1992 12:47:43 GMT
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Ken,

One good reason is that IDL variables change their type "on the fly."
If !PI or any of the others were double precision, the double precision math
would propagate throughout the program. Those of us who do single precision
calculations would have to FLOAT(!PI) to keep our programs single precision and
fast.

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Subject: Re: Floating point system variables on RS6000
Posted by bowman on Tue, 24 Nov 1992 16:22:03 GMT
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In article <1et89fINNlkn@rave.larc.nasa.gov>, zawodny@arbd0.larc.nasa.gov
(Dr. Joseph M Zawodny) wrote:
>
> Ken,
>
> One good reason is that IDL variables change their type "on the fly."
> If !PI or any of the others were double precision, the double precision math
> would propagate throughout the program. Those of us who do single precision
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> fast.

I understand this is true on most machines, but on the RS6000 double
precision is usually faster than single precision, because all single
precision values must be converted to double precision for the floating
point unit and then converted back. In some circumstances, double
precision is slower because the cache size is effectively reduced to half
as large. So _memory_ may be a problem if intermediate results are stored
in double precision, but (on the RS6000) _speed_ is generally not a problem
when working in double precision.

Since there is a !DPI system variable, how about a !DDTOR and !DRADDEG?
(It's OK, I'll just make one myself. Like I do in Fortran. ;-) )