
Subject: Re: IDLgrModel, rotation angles

Posted by [James Kuyper](#) on Mon, 23 Feb 2004 19:49:39 GMT

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Iyubo wrote:

>
> Hello,
>
> I have a transformation matrix and I must find the amount of rotation
> in degrees. How can I do that? Any help would be appreciated.
>

Forget previous reply; I was being too complicated. A much simpler expression for the rotation angle in degrees is:

```
!RADEG*ACOS(0.5D*(TRACE(rot)-1.0D))
```

Warning: if the rotation angle is small, the trace might exceed 3.0 due to round-off error; if it's close to 180 degrees, the trace might be less than -3.0, for the same reason. If you're sure that roundoff is the only possible cause of such a problem, the following modification avoids that problem:

```
!RADEG*ACOS((0.5D*(TRACE(rot)-1.0D)) <1.0 >(-1.0))
```
