Subject: Re: Calculate the included angle between two vectors
Posted by jameskuyper on Fri, 10 Apr 2009 09:47:54 GMT
View Forum Message <> Reply to Message

Chris wrote:
> On Apr 9, 5:43 am, Pierre <pierre.villene...@gmail.com> wrote:
>> On Apr 9, 7:14 am, "dux...@gmail.com" <dux...@gmail.com> wrote:
>>
>>> Is there a function which can calculate the included angle between
>>> two three-dimensional vectors?
>>> jdu
>> Here's a simple solution. Assume v1 and V2 are each three-element
>> vectors of any magnitude. Compute the angle in degrees as follows:
>>
>> angle = acos(transpose(v1)#v2 / sqrt(total(v1^2)) / sqrt(total
>> (v2^2))) * 180./!pi
>>
>> Good luck.
>
> There is an issue with this method due to the fact that acos cannot
> distinguish between positive and negative angles (cos(-theta) = cos
> (theta)).

The angle between two vectors is by definition positive; the question asked does not provide enough information to assign a sign to the angle. "Enough information" could be, for instance, a third vector which defines (via the right-hand rule) which direction of rotation counts as a clockwise rotation, and which one is counterclockwise.