

Re: Usage of complex numbers?

Source: <http://coding.derkeiler.com/Archive/General/comp.programming/2004-03/0980.html>

From: Peter O. Brackett (*no_such_address_at_ix.netcom.com*)

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Chris:

Hi Chris...

[snip]

> *Stinkin quaternions? If you want to compose rotations in three dimensions*
> *quaternions are the way to do this fast. Or would you rather multiply*
> *rotation matrices?*

>

> *Bye,*

> *Chris Dams*

[snip]

I thought Oliver Heaviside put the run to quaternions almost a century ago.

Today in electrical/communications Engineering we seldom rotate in 3D.

I suppose crystallographers and others do that kinda stuff. But 3 is not a big enough dimensionality for coding work... need way higher N D's to get any coding gain.

We EE's do need to rotate in much higher dimensions, all the way up to say 24D where

the Leech Lattice hangs... and it seems we need to use rotation matrices.

At least that's what I've

done in code searches. Of course for certain N's, besides the quaternions

for N=3, there are the octonions,

dodecatonions, etc... they are cute but they just don't fill the needs in

all those N-dimensional spaces where

interesting lattice codes hang...

:-)

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Peter

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