
Subject: Re: digital phantom

Posted by [Achim Hein](#) on Fri, 21 Feb 1997 08:00:00 GMT

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Phil Williams wrote:

>

> I'm in the process of generating a digital phantom to test some code
> that I have written and was wondering if anyone has written a gaussian
> noise generator before I go and do it myself.

If I understand you right, you are looking for noise generators.

IDL offers you two kinds: one to get uniformly distributed noise, the
other one to get gaussian (in IDL it is called normally distributed)
noise.

uniformly : $\text{uni}=2.*\text{PI}*\text{randomu}(\text{seed},\text{N})-\text{PI}$

gaussian : $\text{gaus}=(2.*\text{PI}*\text{randomn}(\text{seed},\text{N}))/12.$

(to get identical variance you have to multiply these factors)

triangle distribution: $\text{tri}=(\text{uni1}+\text{uni2})/2.$

gaussian with small variance: $\text{gaus_small}=(\text{gaus1}+\text{gaus2}+\dots+\text{gausN})/\text{N}$

Cheers

Achim

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