
Subject: Re: unwrap modulo 2pi
Posted by [Wim Bouwman](#) on Fri, 09 Feb 2001 08:42:43 GMT
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> Just curious, how does NINT do the rounding? In IDL there are FLOOR,
> CEIL and ROUND which have well-behaved rounding properties (round up,
> down and to-nearest, respectively). The well-known LONG function is
> not consistent depending on the sign of its argument.

A copy of the NINT-page of the pv-wave manual:

NINT

Converts input to the nearest integer.

Usage

result = NINT(x)

Input Parameters

x : A scalar or array of any PV-WAVE variable type, usually float or double.

Keywords

Long : If present and non-zero, NINT returns a long instead of a short (FIX) integer.

Returned Value

result : The nearest integer to the input value.

Discussion

Instead of truncating the input (as FIX does), first the input is rounded by adding or subtracting 0.5 (depending on whether the input is greater or less than zero), and then it is truncated.

If the input is out of the range of integers (for example, if you pass in 1.0d33), an error message will result and NINT returns garbage.

Add $\frac{1}{2}$ to the input and convert that to a short integer using FIX. If the Long keyword is used, it's converted via long. If the input is a FIX, then it's just passed back. If it's a long, it's also passed back. Strings are converted to bytes before the rounding. In the case of complex values, their magnitude is taken. Structures are not allowed.

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Dr. Wim G. Bouwman phone (++31) (0)15 2786775
Interfacultair Reactor Instituut fax (++31) (0)15 2788303
Technische universiteit Delft w.g.bouwman@iri.tudelft.nl
Mekelweg 15 http://www.iri.tudelft.nl/~bouwman
2629 JB Delft The Netherlands
