Subject: Re: How to rebin complex array?
Posted by James Kuyper on Wed, 14 Apr 2004 13:47:31 GMT
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Timm Weitkamp wrote:

...
>   u = 1 + FLTARR(k) ; create unit vector with k elements

A unit vector is a vector such that total(u*u) eq 1.0" (or for complex
numbers, total(u*conj(u)) eq 1.0). What you've described is a vector
whose elements are all 1, which has no special name.

...
> By the way, there is a good reason for REBIN not to work on complex
> arrays, and that is the fact that there is not really any proper way of
> interpolating between two complex values.

Why in the world not? All of the normal interpolation formulas work
perfectly well when applied seperately to the real and imaginary
components of a table of complex values. The formulas just involve
multiplcation, division, addition, and subtraction, all of which are
perfectly well defined for complex numbers, and they produce reasonable
results (well, not quite - in some higher-order interpolation algorithms
it's necessary to replace c^2 with $c*conj(c)$ in some places).