Subject: Re: How to rebin complex array?
Posted by Yunxiang Zhang on Wed, 14 Apr 2004 20:01:06 GMT
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Folks,

I did some test to rebin a complex array. Thanks for all you guys' help!:)

speed test result: a for loop is not as worse as I would imagine in
this case.

"#" > "for loop" > "special rebin" > "component rebin"

for loop 0.25066495
component rebin 0.53236008
special rebin 0.37491202
# 0.16867399

I also found using fltarr is better than using replicate
fltarr > replicate

replicate 0.039183140
fltarr 0.027969122

```
;here's my testing code
aa=bytscl(reform(ran2_normal(-738345,dim=5000),2,2500))
a=reform(complex(aa[0,*],aa[1,*]))

na=n_elements(a) & k=na

;using for loop
t0=systime(1)
b1=complexarr(na,k)
for i=0,k-1 do begin
b1[*,i]=a
endfor
print, 'for loop', systime(1)-t0

;using component rebin
t0=systime(1)
ra=real_part(a)
ia=imaginary(a)
rb=rebin(ra,[na,k])
ib=rebin(ia,[na,k])
b2=complex(rb,ib)
print,'component rebin', systime(1)-t0

;i call it special rebin, please refer to Peter's post
```

```
t0=systime(1)
d=double(a,0,k)
r=rebin(temporary(d),na,k,/sample)
b3=complex(temporary(r),0,na,k)
print,'special rebin', systime(1)-t0

;using #
t0=systime(1)
b4=a#(1+fltarr(k))
print,'#', systime(1)-t0


t0=systime(1)
for i=0,1000 do aaa=replicate(1.,10000)
print,'replicate', systime(1)-t0

t0=systime(1)
for i=0,1000 do bbb=1+fltarr(10000)
print,'fltarr', systime(1)-t0

end
```