affyContam

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`setRectRegion`	*set a rectangular or circular region in an affybatch to a specified set of values*

Description

set a rectangular or circular region in an affybatch to a specified set of values

Usage

```
setRectRegion(x, chip=1, xinds=251:350, yinds=251:350, vals=10, valgen=NULL)
setCircRegion(x, chip=1, center=c(350,350), rad=100, vals=10, valgen=NULL)
getRectRegion(x, chip=1, xinds=251:350, yinds=251:350)
getCircRegion(x, chip=1, center=c(350,350), rad=100)
```

Arguments

`x`	AffyBatch instance
`chip`	sample index
`xinds`	x coordinates to be contaminated
`yinds`	y coordinates to be contaminated
`vals`	values to be assigned to rectangle elements
`center`	geometric center of circle to be altered
`rad`	radius of circle to be altered, in xy units of the chip addressing system used by xy2indices in the cdf package
`valgen`	function of parameter n that generates n values to be inserted in the altered region

Value

set* functions return AffyBatch instance with intensities modified as requested

get* functions return numeric vectors of intensities as requested.

Author(s)

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Examples

```
library(affydata)
data(Dilution)
opar = par(no.readonly=TRUE)
par(mfrow=c(2,2))
hist(Dilution, main="original")
image(Dilution[,1], main="original")
#
# we will contaminate in two ways: thin line at fixed low intensity, and
# circular blob at moderate random intensity
#
ab = setRectRegion(Dilution, 1, xinds=25:30, yinds=1:620,
  vals=10)
ab = setCircRegion(ab, 1, valgen=function(n){
   rnorm(n, 350,50)})
hist(ab, main="chip 1 contaminated by normal")
image(ab[,1], main="chip 1 contaminated")
ex = getCircRegion(Dilution, 1)
length(ex)
ab = setCircRegion(Dilution, 1, vals=pmin(2*ex,65535))
image(ab[,1], main="chip 1 contaminated by doubling")
par(opar)
```

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