

Rotated Viewports

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It is possible to specify an angle of rotation for a Grid viewport. For example, the following code draws the example multipanel plot at an angle of 15° .

```
> pushViewport(viewport(h = .8, w = .8, angle = 15))  
> grid.multipanel(newpage = FALSE)  
> popViewport()
```

A more complicated example is now developed. First of all we generate some data to plot; an x and a y with an obvious correlation.

```
> x <- rnorm(50)
> y <- x + rnorm(50, 1, 2)
```

Next we generate some statistics from the data.

```
> # We will extend the axes over the entire region so
> # extrapolate scale from main data region
> scale <- extendrange(r = range(x,y))
> extscale <- c(min(scale), max(scale)+diff(scale)*1/3)
```

```

> diffs <- (y - x)
> rdiffs <- range(diffs)
> ddiffs <- diff(rdiffs)
> bxp <- boxplot(diffs, plot = FALSE)
> vp3 <- viewport(x = unit(3, "inches"),
+                 y = unit(3, "inches"),
+                 width = unit(.5, "inches"),
+                 # NOTE that the axis on the boxplot represents
+                 # actual (y - x) values BUT to make
+                 # the bits of the boxplot line
+                 # up with the data points we have to plot
+                 # (y - x)/sqrt(2)
+                 # Hence the sin(pi/4) below
+                 height = unit(ddiffs*sin(pi/4)/diff(scale)*3, "inches"),
+                 just = c("centre", "center"),
+                 angle =
```

