Placing Text on R Graphs

I had a student ask some questions about placing text in R. The following code sort of sums up many of the ways to place text on `plot()` figures. We use `text()`, `mtext()`, `h=`, `v=`, and `sub=` code to accomplish the graph shown. Note that `h` says to place a horizontal line and `v` says to place a vertical line. The graph essentially graphs random points (x,y) on the graph which spans from 0 to 2 on both the x and y range. We graph the points using the uniform U(0,2) distribution.

```r
# placing text in R
# -----------------

x <- runif(50, 0, 2)
y <- runif(50, 0, 2)
plot(x, y, main="Main Title", sub="Subtitle",
     xlab="x-label", ylab="y-label")

# put text within plot
text(0.6, 0.6, "text at (.6,.6)")
abline(h=.6, v=.6, lty=2)

# putting marginal notes on graph
# -------------------------------
for (i in 1:4) {
    mtext(-1:4, side=i, at=.7,
          line=-1:4)
}
mtext(paste("side", 1:4), side=1:4,
      line=-1, font=2)

The plot generated is shown below.

The `for()` loop places the numbers -1 to 4 on corresponding lines in each of the 4 margins at an off-center position of 0.7 measured in user coordinates. The subsequent call places a label on each side, giving the side number. The argument `font=2` means that a boldface font is used. Notice that not all of the margins are wide enough to hold all the numbers and that it is possible to use negative line numbers to place text within the plotting region.

We can also place legends to various scatter plot information on graphs (at places other than the default). We will talk about how to do that later, when we investigate linear correlation problems and plots.