The *lattice* package is built on top of *grid* and provides a quite sophisticated example of writing high-level plotting functions using *grid*. Because *lattice* consists of *grid* calls, it is possible to both add *grid* output to *lattice* output, and *lattice* output to *grid* output.

```r
> library(grid)
```

### Adding grid to lattice

Panel functions in *lattice* can include *grid* calls. The following example adds a horizontal line at 0 to a standard *xyplot* (see Figure 1):

```r
> xyplot(y ~ x | g, panel = function(x, y) {
+     panel.xyplot(x, y);
+     grid.lines(unit(c(0, 1), "npc"), unit(0, "native"),
+            gp = gpar(col = "grey"))
+ })
```

The following example writes a left-justified label in each strip (see Figure 2):

```r
> xyplot(y ~ x | g, strip = function(which.given, which.panel, ...) {
+     grid.rect()
+     grid.text(paste("Variable ", which.given, ": Level ",
+              which.panel[which.given], sep = ""),
+            unit(1, "mm"), .5, just = "left")
+ })
```

### Adding lattice to grid

It is also possible to use a *lattice* plot as an element of a *grid* image. The following example splits up the page so that there is an *xyplot* beside a panel of text (see Figure 3). First of all, the lattice plot is created, but not drawn. *grid* is used to create some regions and the lattice plot is drawn into one of those regions.

```r
> someText <- paste("A panel of text", "produced using", "raw grid code",
+                   "that could be used", "to describe",
+                   "a lattice plot")
```
Figure 1: A lattice panel function using grid.

Figure 2: A lattice strip function using grid.
Figure 3: A lattice plot used as a component of a larger grid image.

```r
+ "the plot", "to the right.", sep = "\\n")
> latticePlot <- xyplot(y ~ x | g, layout = c(2, 4))
> grid.rect(gp = gpar(ity = "dashed"))
> pushViewport(viewport(layout = grid.layout(1, 2,
+ widths = unit.c(unit(1, "strwidth", someText) +
+ unit(2, "cm"),
+ unit(1, "null"))))
> pushViewport(viewport(layout.pos.col = 1))
> grid.rect(gp = gpar(fill = "light grey"))
> grid.text(someText,
+ x = unit(1, "cm"), y = unit(1, "npc") - unit(1, "inches"),
+ just = c("left", "top"))
> popViewport()
> pushViewport(viewport(layout.pos.col = 2))
> print(latticePlot, newpage = FALSE)
> popViewport(2)
```