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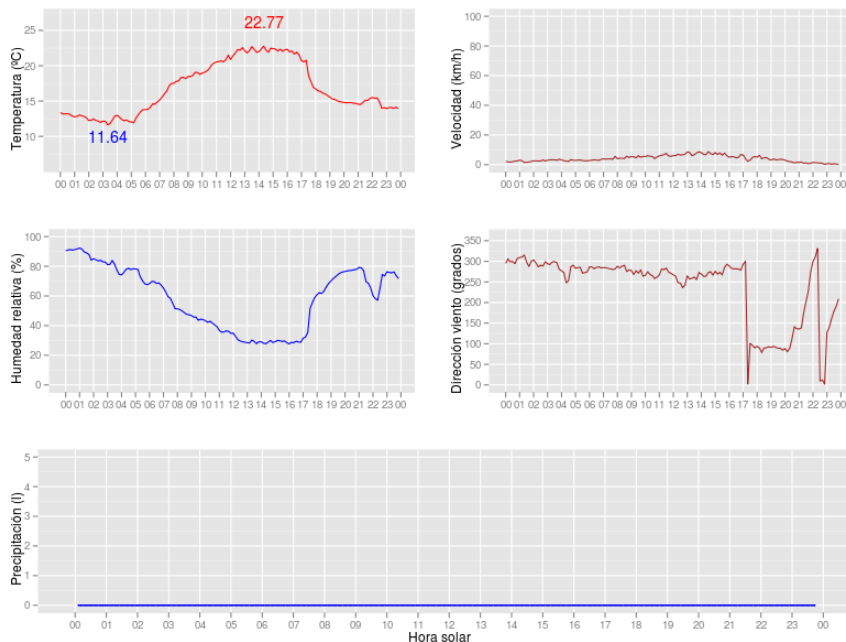
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## Place title of multiplot panel with ggplot2



From the help found here I've managed to create this multiplot panel:



with the following code:

```
library(zoo)
library(ggplot2)

datos=read.csv("paterna.dat", sep=";", header=T, na.strings="-99.9")

datos$dia=as.POSIXct(datos[,1], format="%y/%m/%d %H:%M:%S")

datos$Precipitación[is.na(datos$Precipitación)]=0
xlim = as.POSIXct(c("2010-05-12 00:00:00", "2010-05-12 23:50:00"))
ylim = trunc(max(datos$Precipitación) + 5)
tmax = trunc(max(datos$Temperatura) + 5)
tmin = trunc(min(datos$Temperatura) - 5)

tmx = max(datos$Temperatura)
tmxpos=which.max(datos$Temperatura)
tmn = min(datos$Temperatura)
tmnpos=which.min(datos$Temperatura)

tmp=ggplot(data=datos,aes(x=dia, y=Temperatura)) + geom_line(colour="red") +
  ylab("Temperatura (°C)") +
  xlab(" ") + scale_x_datetime(limits=xlim, format = "%H",major='hour') +
  scale_y_continuous(limits = c(tmin,tmax)) + geom_text(data=datos[tmxpos,], label=tmx,
  vjust=-1.5, colour="red") + geom_text(data=datos[tmnpos,], label=tmn, vjust=1.5,
  colour="blue")

pre=ggplot(data=datos,aes(x=dia, y=Precipitación)) +
  geom_bar(colour="blue",stat="identity",fill="blue") +
  ylab("Precipitación (l)") + xlab("Hora solar") + scale_x_datetime(limits=xlim, format =
  "%H",major='hour') + scale_y_continuous(limits=c(0,ylim))

vel=ggplot(data=datos,aes(x=dia, y=Velocidad)) + geom_line(colour="brown") +
  ylab("Velocidad (km/h)") + xlab(" ") + scale_x_datetime(limits=xlim, format =
  "%H",major='hour') + scale_y_continuous(limits = c(0,100))

dir=ggplot(data=datos,aes(x=dia, y=Dirección)) + geom_line(colour="brown") +
  ylab("Dirección viento (grados)") + xlab(" ") + scale_x_datetime(limits=xlim, format =
  "%H",major='hour') + scale_y_continuous(limits = c(0,360))

hum=ggplot(data=datos,aes(x=dia, y=Humedad.Relativa)) + geom_line(colour="blue") +
  ylab("Humedad relativa (%)") + xlab(" ") + scale_x_datetime(limits=xlim, format =
  "%H",major='hour') + scale_y_continuous(limits = c(0,100))

grid.newpage()
pushViewport(viewport(layout = grid.layout(3, 2)))
print(tmp, vp = viewport(layout.pos.row = 1, layout.pos.col = 1))
print(vel, vp = viewport(layout.pos.row = 1, layout.pos.col = 2))
```

```
print(dir, vp = viewport(layout.pos.row = 2, layout.pos.col = 2))
print(hum, vp = viewport(layout.pos.row = 2, layout.pos.col = 1))
print(pre, vp = viewport(layout.pos.row = 3, layout.pos.col = 1:2))
```

Now I'm missing the title of the multiplot that I want to be the met. station name. I haven't found how to set main title on grid.newpage or viewport. I've read about grid.arrange but couldn't figure out how to use it in my case.

How can this be done? For sure it's gonna be an easy question for you.

You can find source data in <http://ubuntuone.com/4G01fn7cJ1jMIOKh>

Thanks in advance

**UPDATE:** Thanks to koshke I found the solution. The working code is:

```
grid.newpage()
pushViewport(viewport(layout = grid.layout(4, 2, heights = unit(c(0.5, 5, 5, 5),
"null"))))
grid.text("MAIN TITLE", vp = viewport(layout.pos.row = 1, layout.pos.col = 1:2))
print(tmp, vp = viewport(layout.pos.row = 2, layout.pos.col = 1))
print(vel, vp = viewport(layout.pos.row = 2, layout.pos.col = 2))
print(dir, vp = viewport(layout.pos.row = 3, layout.pos.col = 2))
print(hum, vp = viewport(layout.pos.row = 3, layout.pos.col = 1))
print(pre, vp = viewport(layout.pos.row = 4, layout.pos.col = 1:2))
```

r ggplot2

edited Jun 2 '12 at 18:54



Marijn

6,821 4 28 58

asked Dec 23 '11 at 11:27



pacomet

1,135 3 23 52

from [this document](#) i found the command (last page but one) but I'm not sure if it is what you are looking for  
`grid.text("The user adds a title!", gp = gpar(fontsize = 20))` — [Seb](#) Dec 23 '11 at 11:34

@Seb, maybe it's possible to adapt. I think I have to name viewports and then look for the one I want to place the text in. Not sure if it's gonna work but will try. Thanks — [pacomet](#) Dec 23 '11 at 11:54

the document linked describes how to get the viewport you're looking for - sorry that i can't be much of a help but i have no experience with this! — [Seb](#) Dec 23 '11 at 11:55

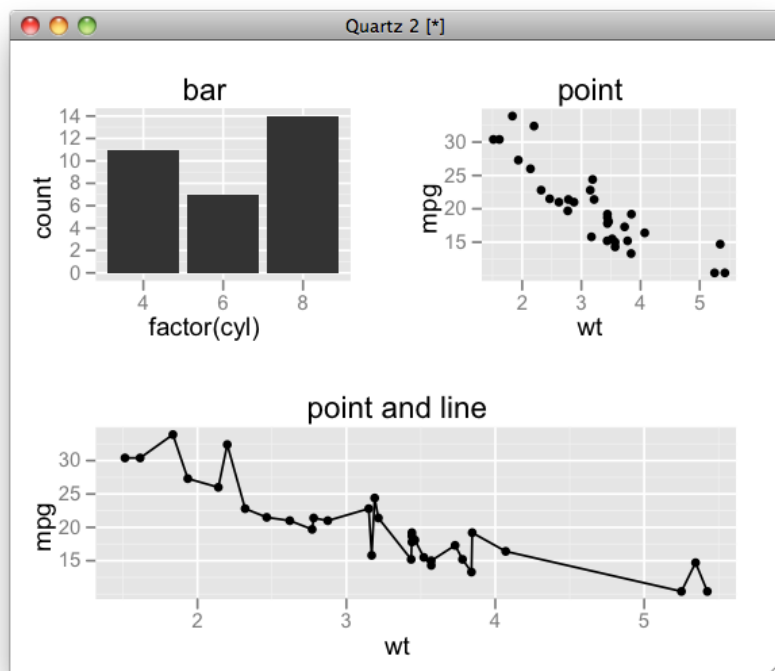
Tried but not completely working, it plots the title right in the center of the page maybe because there is only one viewport. It's promising so I have to go deeper in viewports. Thanks — [pacomet](#) Dec 23 '11 at 12:12

## 2 Answers

If I understand correctly what you want to do, probably you can use `+opts(title = xxx)` :

```
p1 <- ggplot(mtcars, aes(factor(cyl))) + geom_bar()
p2 <- ggplot(mtcars, aes(wt, mpg)) + geom_point()
p3 <- p2 + geom_line()

pushViewport(viewport(layout = grid.layout(2, 2)))
print(p1 + opts(title = "bar"),
      vp = viewport(layout.pos.row = 1, layout.pos.col = 1))
print(p2 + opts(title = "point"),
      vp = viewport(layout.pos.row = 1, layout.pos.col = 2))
print(p3 + opts(title = "point and line"),
      vp = viewport(layout.pos.row = 2, layout.pos.col = 1:2))
```



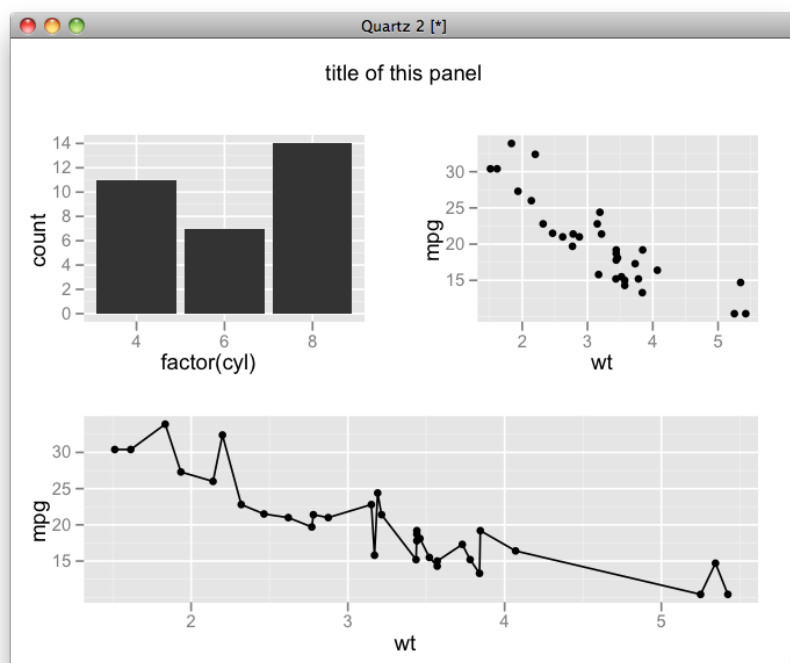
### UPDATED

here is an example:

```
pushViewport(viewport(layout = grid.layout(3, 2, heights = unit(c(1, 4, 4), "null"))))
grid.text("title of this panel", vp = viewport(layout.pos.row = 1, layout.pos.col = 1:2))
print(p1, vp = viewport(layout.pos.row = 2, layout.pos.col = 1))
print(p2, vp = viewport(layout.pos.row = 2, layout.pos.col = 2))
print(p3, vp = viewport(layout.pos.row = 3, layout.pos.col = 1:2))
```

what you need to do is:

1. Make one extra row in grid.layout
2. Adjust width
3. Draw textGrob on the extra viewport row.



edited Dec 23 '11 at 12:29

answered Dec 23 '11 at 12:11

 [kohnske](#)  
35.3k 4 88 120

This is not what I need, maybe I didn't explain well. Data comes from a meteorological station, then I want to place the station name and date (a title) on top of the panel. I don't need a title in each graph (I removed them from my first try) as the y axis also names the graph. Thanks. – [pacomet](#) Dec 23 '11 at 12:16

OK, I have updated. At the moment, layout for ggplot2 is not straightforward. Maybe it will be more easy in future. – [kohske](#) Dec 23 '11 at 12:30

Thank's kohske, it is working now. – [pacomet](#) Dec 23 '11 at 13:21

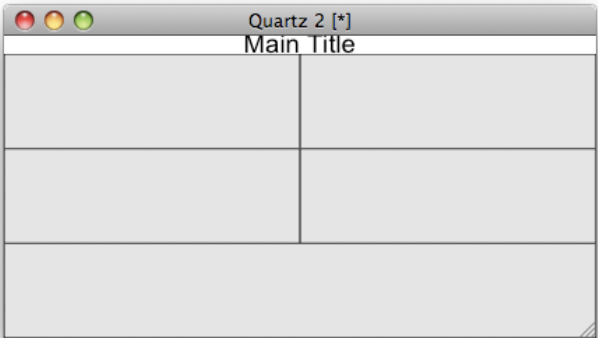


```
library(gridExtra)

## place simple rectangles for clarity
r <- rectGrob(gp=gpar(fill="grey90"))

top <- arrangeGrob(r, r, r, r, nrow=2)

grid.arrange(top, r, ncol=1, main = "Main Title", heights=c(2, 1))
```



answered Jan 21 '12 at 22:19

 [baptiste](#)

27.2k 3 56 110

1 Could you explain this a bit? – [Davoud Taghawi-Nejad](#) Jul 27 '12 at 20:33

you can nest arrangeGrobs, in the above I first create a 2x2 layout with rectangles, and I then arrange it with one rectangle at the bottom. The global title is just an option of `grid.arrange` – [baptiste](#) Jul 27 '12 at 20:53