

ARMA Hilfsfunktion

```
library(ggplot2)
library(grid)
library(rlist)
library(forecast)

## Registered S3 method overwritten by 'quantmod':
##   method      from
##   as.zoo.data.frame zoo

plot_acf <- function(throughputs, type = c("acf", "pacf"),
                      title="Autokorrelationsfunktionen"){

  grid.newpage()
  pushViewport(viewport(
    layout=grid.layout(3,2, heights = unit(c(1, 5, 5), "null"))))

  if (type == "acf") {
    chosen_func <- ggAcf
    grid.text(title, gp=gpar(fontsize=20),
              vp = viewport(layout.pos.row = 1, layout.pos.col = 1:2))
  }
  else {
    chosen_func <- ggPacf
    grid.text(title, gp=gpar(fontsize=20),
              vp = viewport(layout.pos.row = 1, layout.pos.col = 1:2))
  }

  vodafone_plot <- chosen_func(throughputs$vodafone) +
    ggtitle("Vodafone") + ylab("Korrelation") + theme_grey(base_size = 16)
  tmobile_plot <- chosen_func(throughputs$tmobile) + ggtitle("T-Mobile") +
    ylab("Korrelation") + theme_grey(base_size = 16)
  o2_plot <- chosen_func(throughputs$o2) + ggtitle("O2") + ylab("Korrelation") +
    theme_grey(base_size = 16)

  print(vodafone_plot, vp=viewport(layout.pos.row = 2, layout.pos.col = 1))
  print(tmobile_plot, vp=viewport(layout.pos.row = 2, layout.pos.col = 2))
  print(o2_plot, vp=viewport(layout.pos.row = 3, layout.pos.col = 1))
}
```