ggplot2 now has an official extension mechanism. This means that others can now easily create their own stats, geoms and positions, and provide them in other packages. This should allow the ggplot2 community to flourish, even as less development work happens in ggplot2 itself. This page showcases these extensions.

ggiraph
Make ggplot interactive
(ggiraph.html)

ggstance
Horizontal versions of ggplot2 geoms
(ggstance.html)

ggalt
Extra coordinate systems, geoms & stats
(ggalt.html)

ggforce
Accelarating ggplot2
(ggforce.html)

ggrepel
Repel overlapping text labels
(ggrepel.html)

ggraph
Plot graph-like data structures
(ggraph.html)

ggpmisc
Miscellaneous extensions to ggplot2
(ggpmisc.html)

geomnet
Network visualizations in ggplot2
(geomnet.html)

ggExtra
Marginal density plots or histograms
(ggExtra.html)

gganimate
Create easy animations with ggplot2
(gganimate.html)

plotROC
Interactive ROC plots
(plotROC.html)

ggthemes
ggplot themes and scales
(ggthemes.html)

ggspectra
Extensions for radiation spectra
(ggspectra.html)

ggnetwork
Geoms to plot networks with ggplot2
(ggnetwork.html)

ggtech
ggplot2 tech themes, scales, and geoms
(ggtech.html)

ggradar
radar charts with ggplot2
(ggradar.html)

ggTimeSeries
Time series visualisations
(ggTimeSeries.html)

ggtree
A phylogenetic tree viewer
(ggtree.html)

ggseas
Seasonal adjustment on the fly
(ggseas.html)

ggseas

https://github.com/ellisp/ggseas (https://github.com/ellisp/ggseas)

Seasonal adjustment on the fly extension for ggplot2. Convenience functions that let you easily do seasonal adjustment on the fly with ggplot. Depends on the `seasonal` package (https://cran.r-project.org/web/packages/seasonal/index.html) to give you access to X13-SEATS-ARIMA.

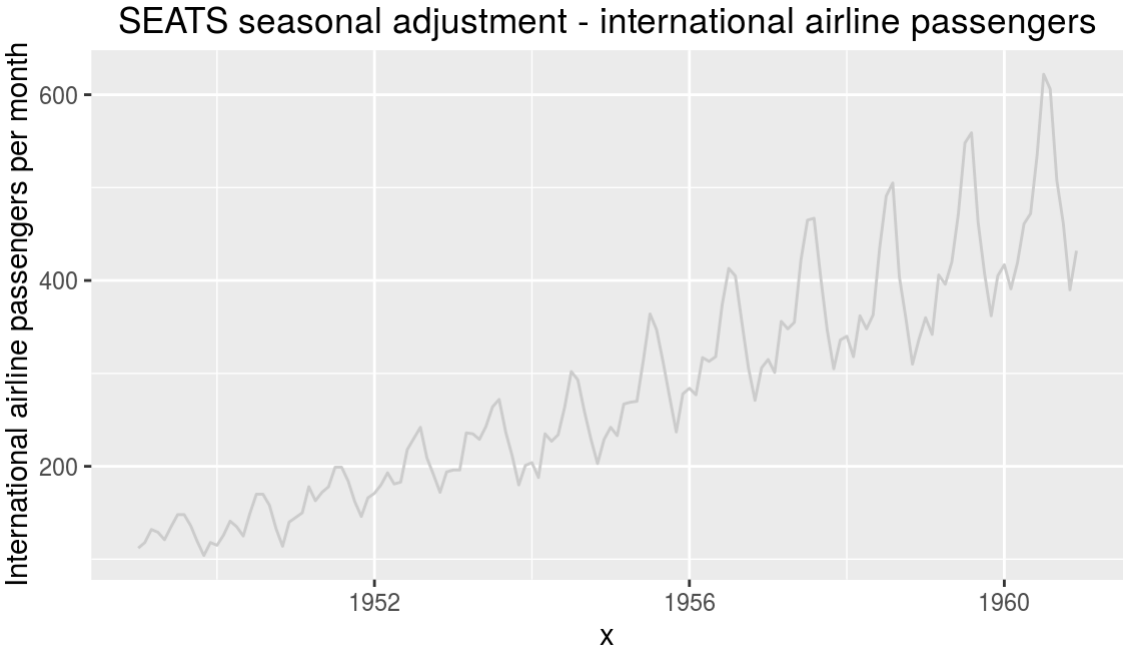
```
# Example from https://github.com/ellisp/ggseas
library(ggplot2)
library(ggnet)
library(ggseas)
```

Usage

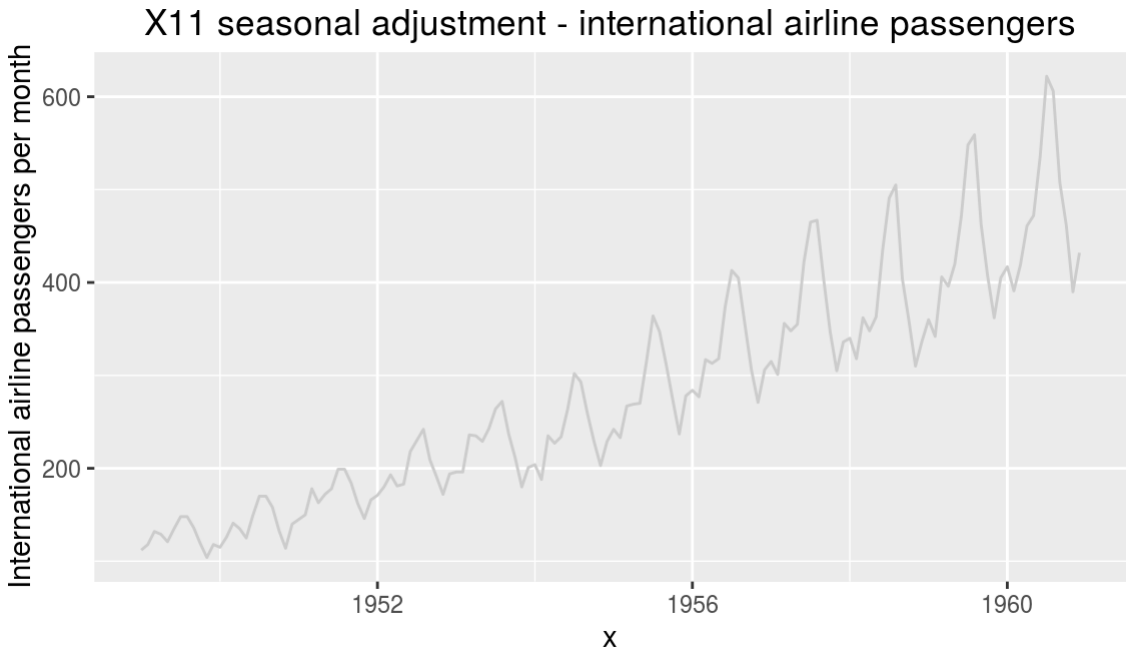
So far there are three types of seasonal adjustment possible

X13-SEATS-ARIMA

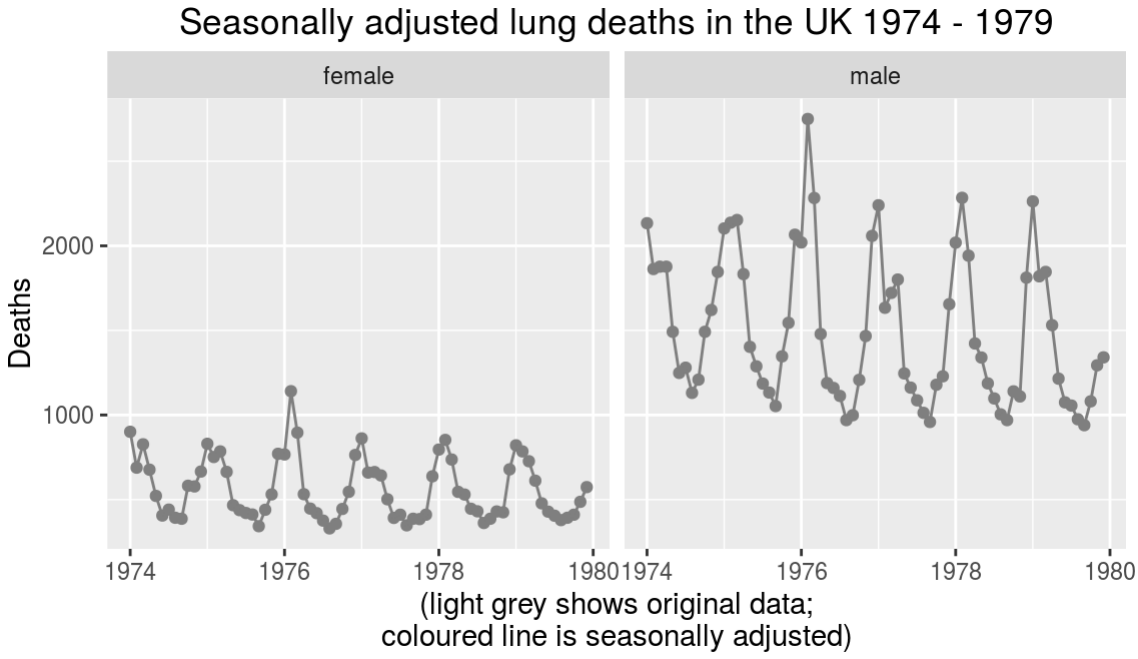
```
# make demo data
ap_df <- data.frame(
   x = as.numeric(time(AirPassengers)),
   y = as.numeric(AirPassengers)
)

# SEATS with defaults
ggplot(ap_df, aes(x = x, y = y)) +
   geom_line(colour = "grey80") +
   stat_seas(start = c(1949, 1), frequency = 12) +
   ggtitle("SEATS seasonal adjustment - international airline passengers") +
   ylab("International airline passengers per month")
```




```
# X11 with no outlier treatment
ggplot(ap_df, aes(x = x, y = y)) +
   geom_line(colour = "grey80") +
   stat_seas(start = c(1949, 1), frequency = 12, x13_params = list(x11 = "", outli
er = NULL)) +
   ggtitle("X11 seasonal adjustment - international airline passengers") +
   ylab("International airline passengers per month")
```

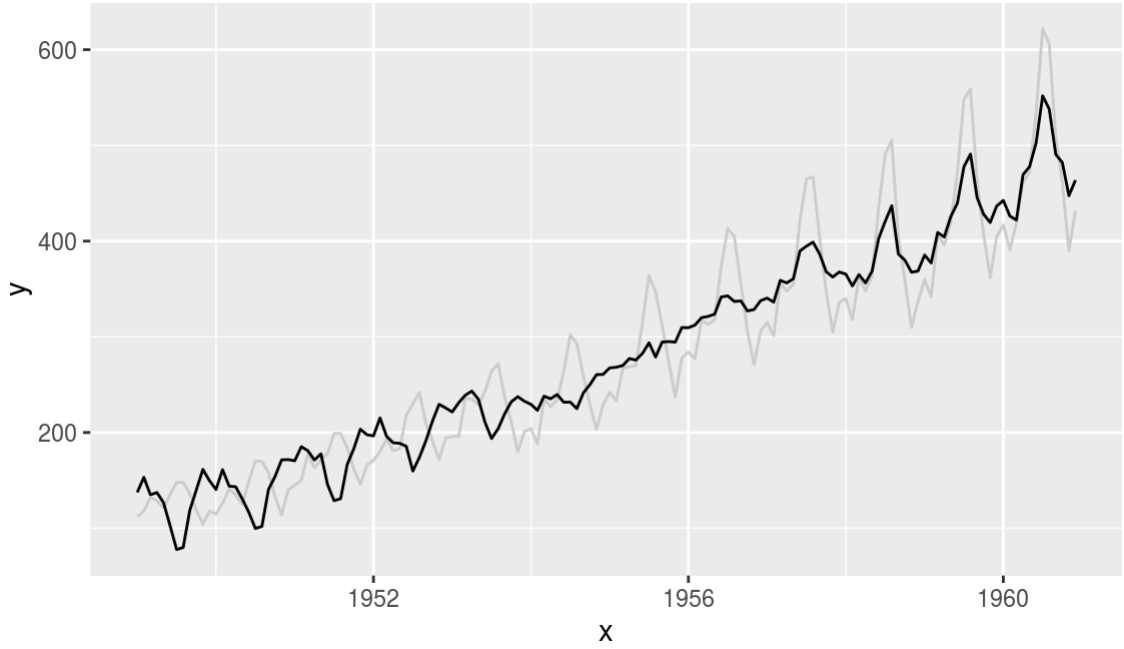



```
ggplot(ldeaths_df, aes(x = YearMon, y = deaths, colour = sex)) +
   geom_point(colour = "grey50") +
   geom_line(colour = "grey50") +
   facet_wrap(~sex) +
   stat_seas(start = c(1974, 1), frequency = 12, size = 2) +
   ggtitle("Seasonally adjusted lung deaths in the UK 1974 - 1979") +
   ylab("Deaths") +
   xlab("(light grey shows original data;\ncoloured line is seasonally adjusted)")
+
   theme(legend.position = "none")
```

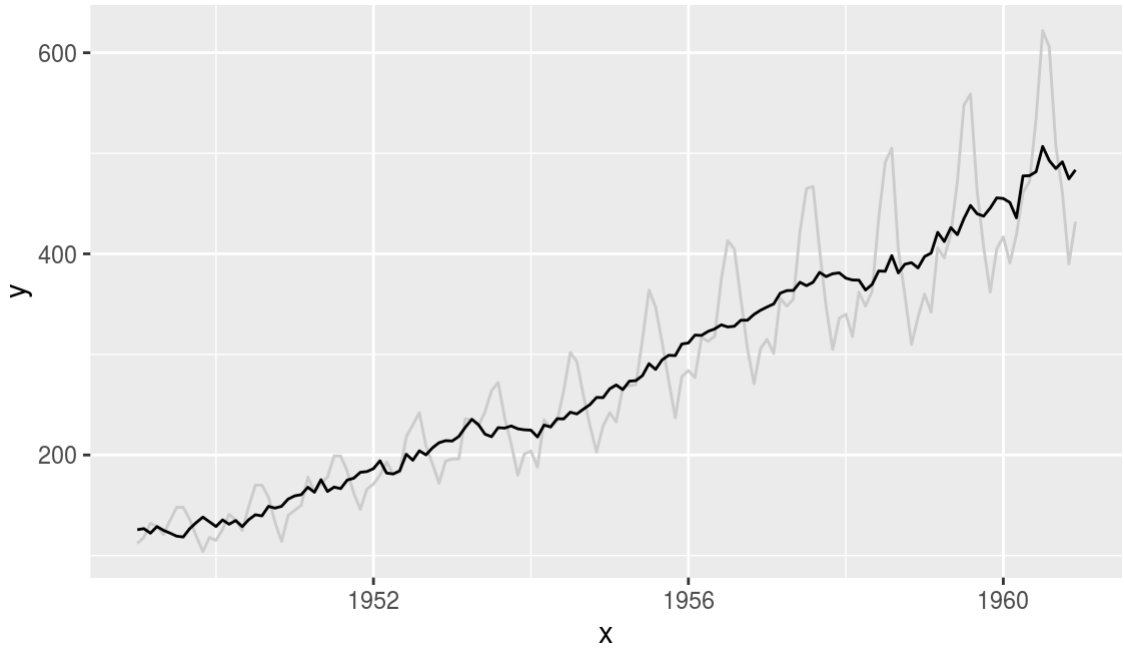


STL (LOESS-based decomposition)

```
# periodic if fixed seasonality; doesn't work well:
ggplot(ap_df, aes(x = x, y = y)) +
   geom_line(colour = "grey80") +
   stat_stl(frequency = 12, s.window = "periodic")
```

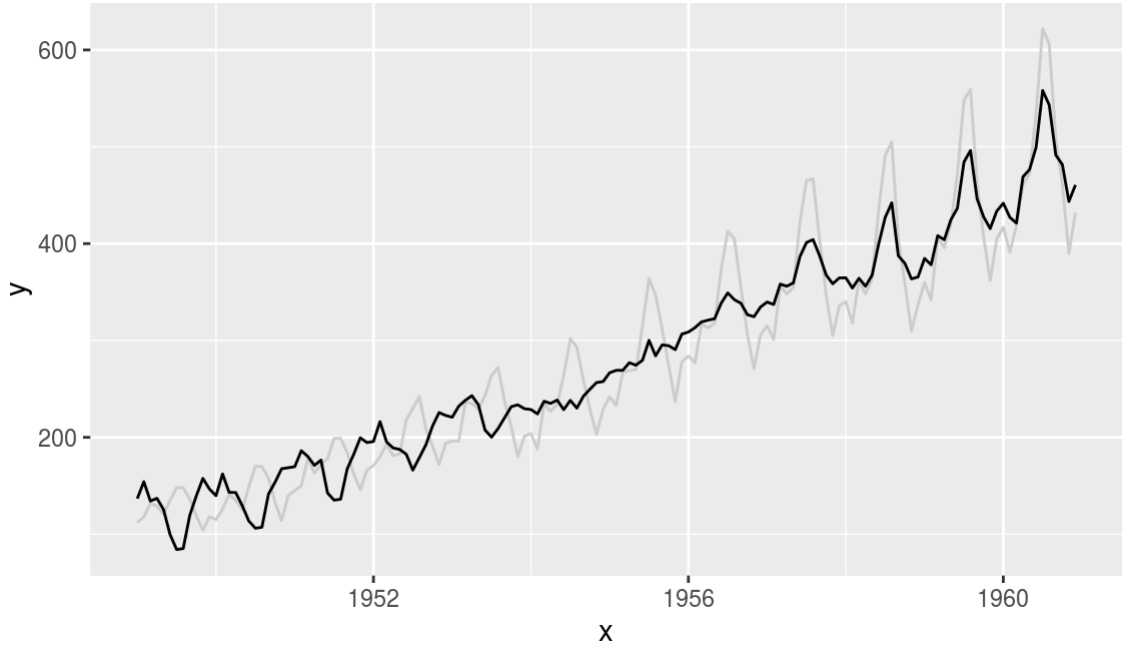



```
# seasonality varies a bit over time, works better:
ggplot(ap_df, aes(x = x, y = y)) +
   geom_line(colour = "grey80") +
   stat_stl(frequency = 12, s.window = 7)
```



Classical decomposition

```
# default additive decomposition (doesn't work well in this case!):
ggplot(ap_df, aes(x = x, y = y)) +
   geom_line(colour = "grey80") +
   stat_decomp(frequency = 12)
```




```
# multiplicative decomposition, more appropriate:
ggplot(ap_df, aes(x = x, y = y)) +
   geom_line(colour = "grey80") +
   stat_decomp(frequency = 12, type = "multiplicative")
```