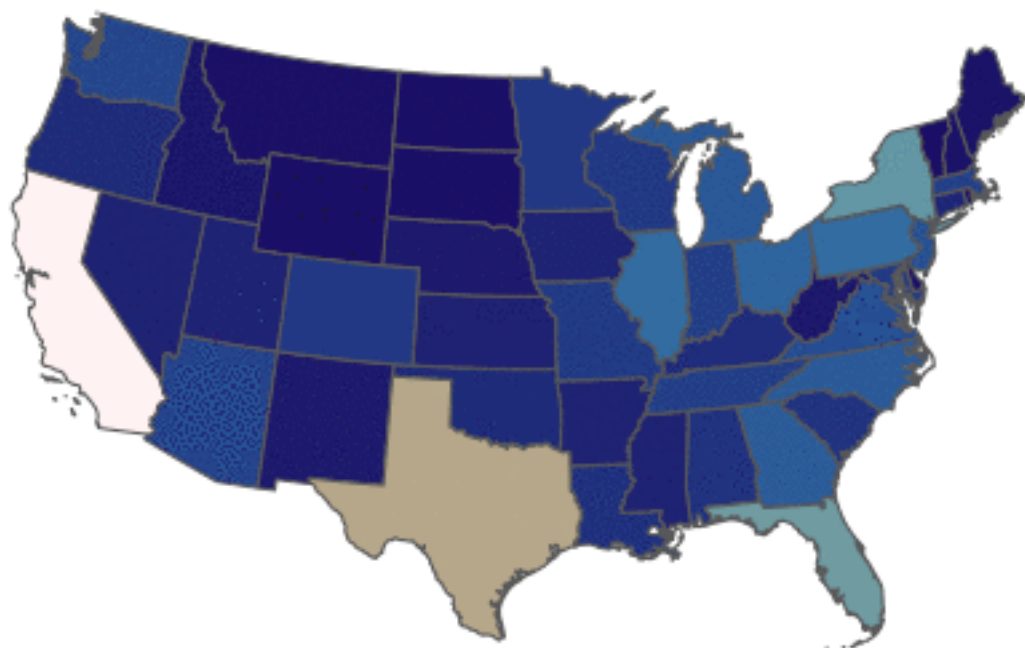




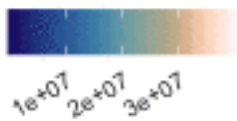


www.data-mining.inist.cn/slides/user2018

Showing Original



Population



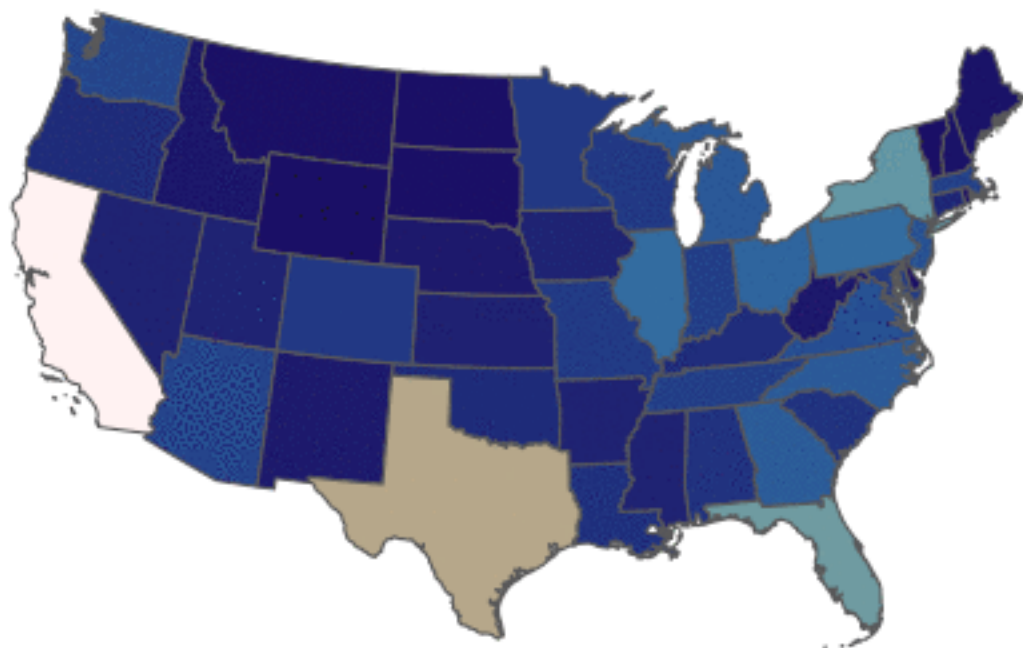
Shape transitions

```
us$type <- 'Original'
us_hex$type <- 'Cartogram Weigted by
Population'
us_ca$type <- 'Hexagonal Tiling'
us_sq$type <- 'Square Tiling'

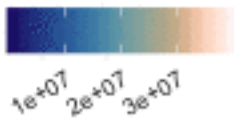
us_all <- rbind(
  us,
  us_hex[, names(us)],
  us_ca[, names(us)],
  us_sq[, names(us)]
)

(p %+% us_all) +
  labs(
    title = 'Showing {closest_state}'
  ) +
  transition_states(type, 2, 1)
```

Showing Original



Population



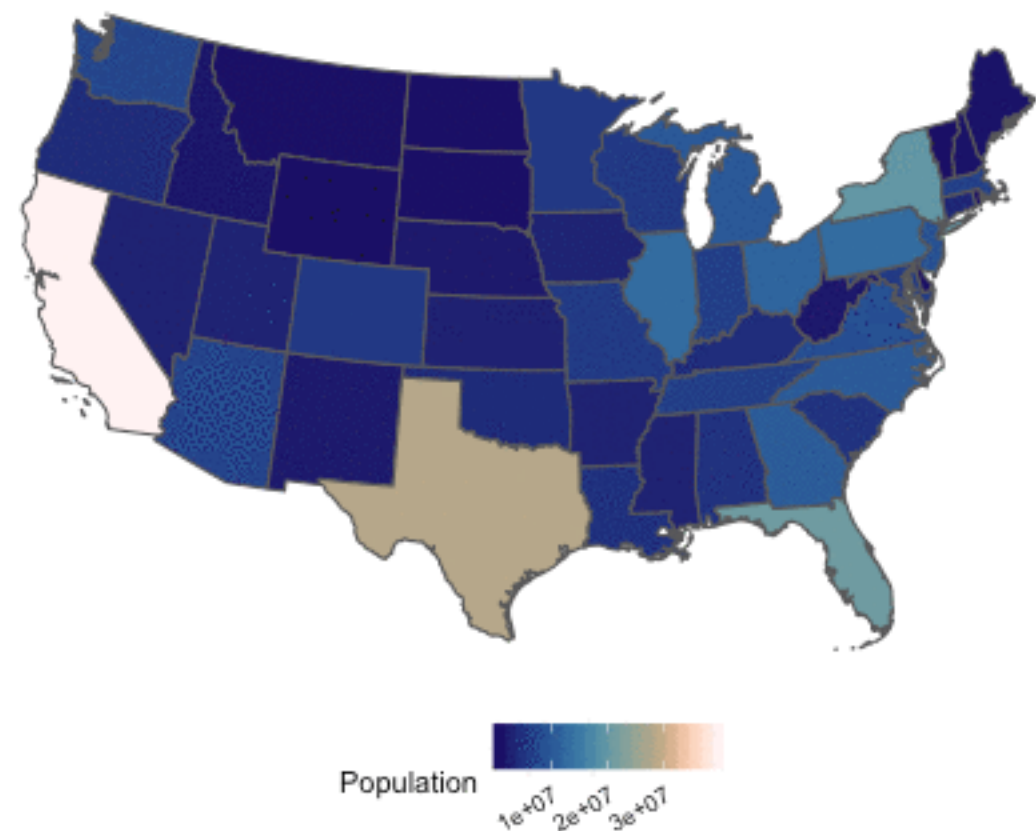
Shape transitions

```
us$type <- 'Original'
us_hex$type <- 'Cartogram Weigted by
Population'
us_ca$type <- 'Hexagonal Tiling'
us_sq$type <- 'Square Tiling'

us_all <- rbind(
  us,
  us_hex[, names(us)],
  us_ca[, names(us)],
  us_sq[, names(us)]
)

(p %+% us_all) +
  labs(
    title = 'Showing {closest_state}'
  ) +
  transition_states(type, 2, 1)
```

Showing Original



Future Work

Performance

The goal is real time rendering!
Requires improvements to the whole
rendering stack:
ggplot2
grid
graphic devices

Segue

Changing scales and coordinate systems
are most pertinent.
Change encodings are nice for show-off but
less useful, and very hard

