Legislative Network Visualization with R

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This lightning talk is a case study in online data collection and network visualization with R. Its aim is to illustrate how computational methods can assist the study of political institutions, using legislative cosponsorship networks as an example application [1,2].

The talk explains

- how to collect amendment and bills data from the French Parliament,
- how to build legislative networks from cosponsorship among Members of Parliament, and
- how to visualize these networks with R and interactive libraries.

Its four main slides show

1. how to use XPath syntax to parse HTML data with the \texttt{XML} package,
2. how to use the \texttt{igraph} and \texttt{tnet} packages to produce weighted network measures,
3. how to use the \texttt{sna} and \texttt{ggplot2} packages to build and plot network data in R, and
4. how to export GEXF networks for visualization with the \texttt{sigma.js} Javascript library.

Demo material is available at

- \texttt{http://briatte.org/sigma} (interactive visualization)
- \texttt{https://github.com/briatte/flegscrap} (replication code)
- \texttt{https://github.com/briatte/neta} (training data)

\textbf{References}


Appendix 1 to “Legislative Network Visualization with R”

Network visualization with R and ggplot2 using the ggnet function of the GGally package, showing bill and resolution cosponsorship between French députés from 2007 to 2012.
Appendix 2 to “Legislative Network Visualization with R”

Screenshots from the interactive visualization at http://briatte.org/omega (requires Javascript). The network data were exported from R to GEXF with the rgexf package.
Appendix 3 to “Legislative Network Visualization with R”

Additional references


