

Data Drawing Applications

Group 3

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Information Visualization

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Outline

- What is Data Drawing?
- Overview of known and new applications.
- Our findings.
- Live demos.
- Honorary mentions of other applications.
- Recommendations.

What is Data Drawing?

- Create non-standard (custom) charts.
- Specify binding to data characteristics → visual properties manually
 - Width, length, colors, etc.
- Respond to different datasets automatically.
- Fully customizable for users.

Applications Covered In 2019

- Charticator
- Lyra
- Data Illustrator

What to find out?

- New tools
- Changes of known tools?
 - Updates?
 - New branch?
 - New versions?
 - e.g. Lyra 2

Applications Covered In 2021


- VisComposer
- DataSelfie
- DataShot
- Lyra2
- Revize
- Dgbae
- Vercel
- Visception
- DataToon
- ...
- Many tools online
 - Visualization only?
 - Data drawing only?
- Found in references/citations
- From papers
- Tabular data vs. graph data

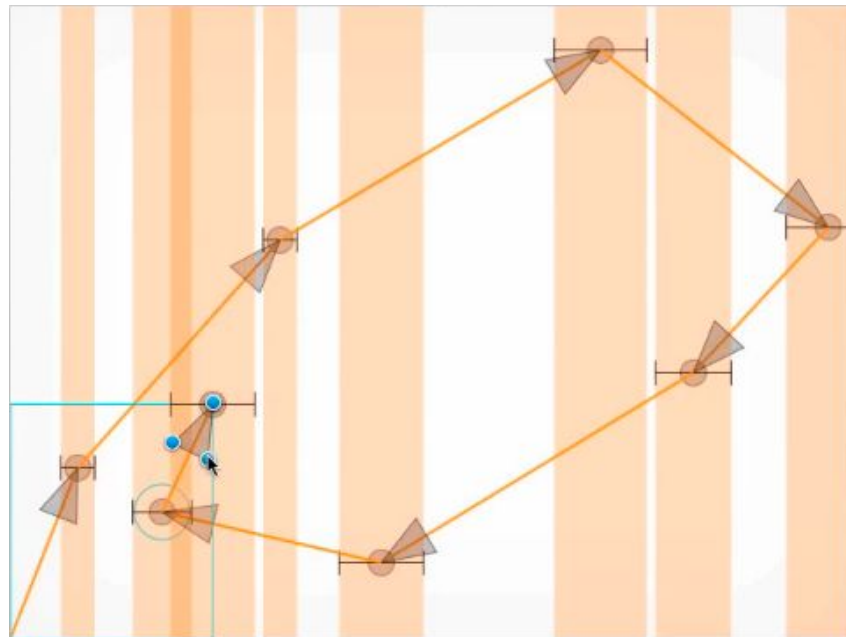
Overview

■ In depth research
 ■ Basic research

Open									
Name	Source	Self-hostable	Local install	Input Data Formats	Undo/Redo	Data Type	Surveyed	Price	SVG Export
Charticulator	Yes	Yes/No	No	CSV	Yes	Tabular	2019	free	Yes
Data Illustrator	No	No	No	CSV	Yes	Tabular	2019	free	Yes
Lyra2	Yes	No	Yes	JSON, CSV, TSV	Yes	Tabular	2021	free	Yes
DataToon	No	Yes	Yes	JSON, CSV, TSV	Yes	Graph	2021	free	Yes
VisComposer	No	Yes	Yes	-	-	Tabular	2021	-	Yes
DataSelfie	Yes	No	No	-	No	Tabular	2021	-	-
StructGraphics	Yes	Yes	Yes	JSON	Yes	Tabular	2019	free	Yes
Ivy	No	Yes	Yes	CSV	Yes	Tabular	2019	free	Yes
DataInk	No	Yes	Yes	-	-	Tabular	2021	free	-
DataQuilt	No	Yes	Yes	-	-	Tabular	2021	free	-

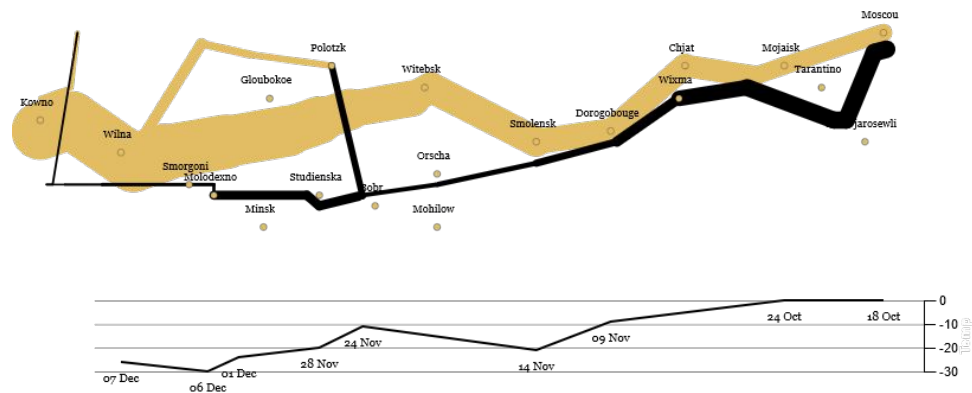
Datasets - Bret Victor

- Made up dataset → recreated by group 5 IVIS 2019
-  [Link](#)
- Tabular Data



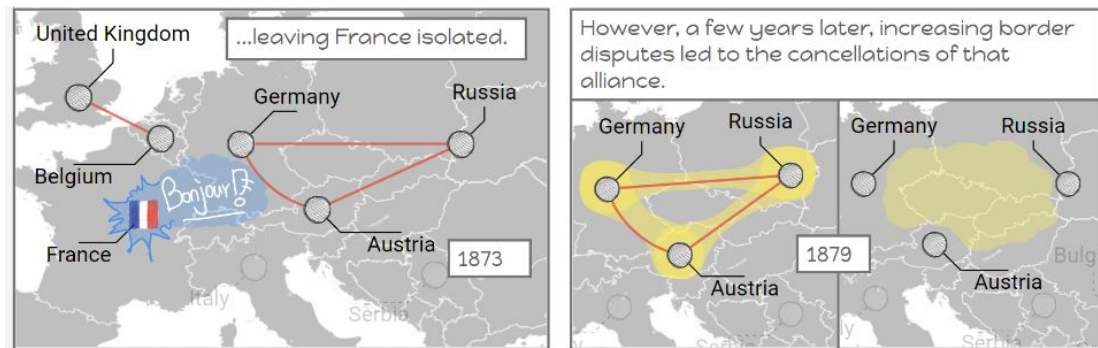
Datasets - Napoleon

- Creator: Charles Joseph Minard
- Depicts Napoleon's 1812 Russia campaign
- Tabular Data
- Temperature, Army size, Direction, Longitude, Latitude, Cities



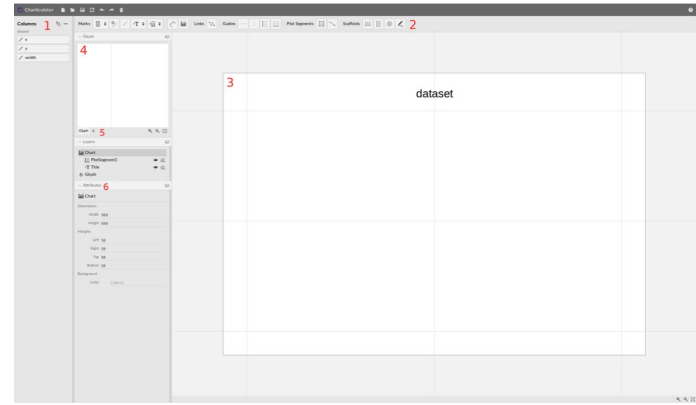
Datasets - World War 1

- Network Data
- World War 1
- Specifically tailored for DataToon.

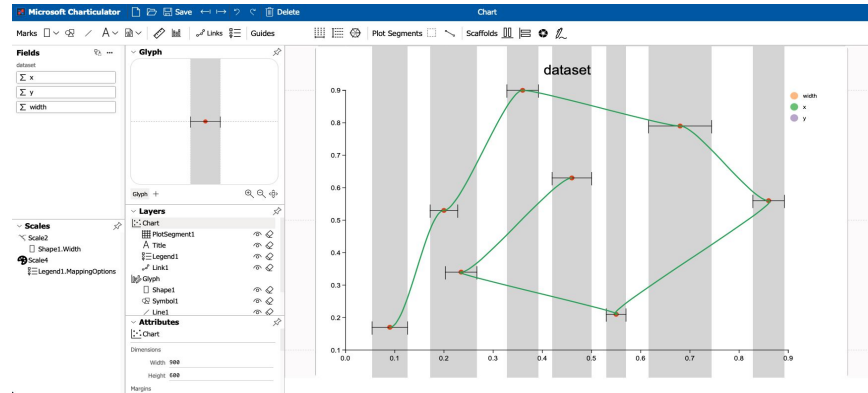


Charticulator

- Version 2.0.3
- From Microsoft
- Drag & Drop Support
- Web application
- Powerful, stable, easy
- Good import and export features
- Open Source!



Charticulator Version 2019,
image from group 5 IVIS 2019 (CC BY 4.0)



Charticulator Version 2021
Image taken by the authors.

Charticulator

Live Demo

<https://youtu.be/TUCnVj9WOaM>

Lyra 1 - Recap

- Powerful data drawing application
- Web application
- Drag & Drop Support
- Data manipulation support
 - Grouping, filtering etc.
- Open Source

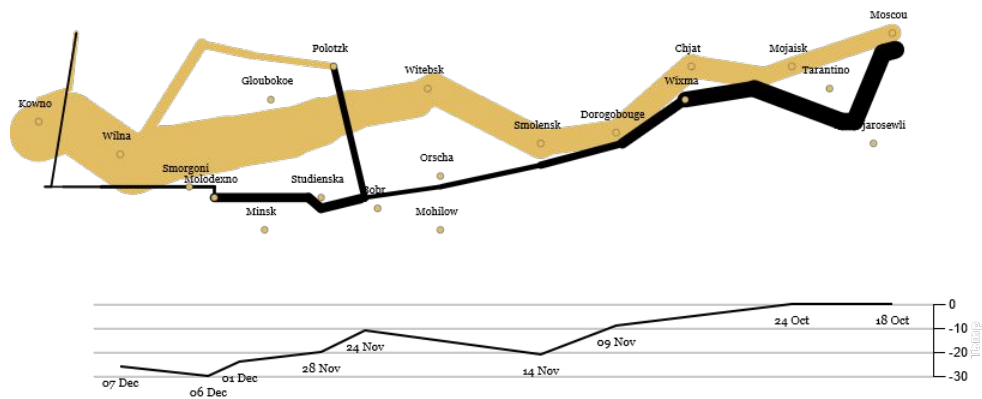
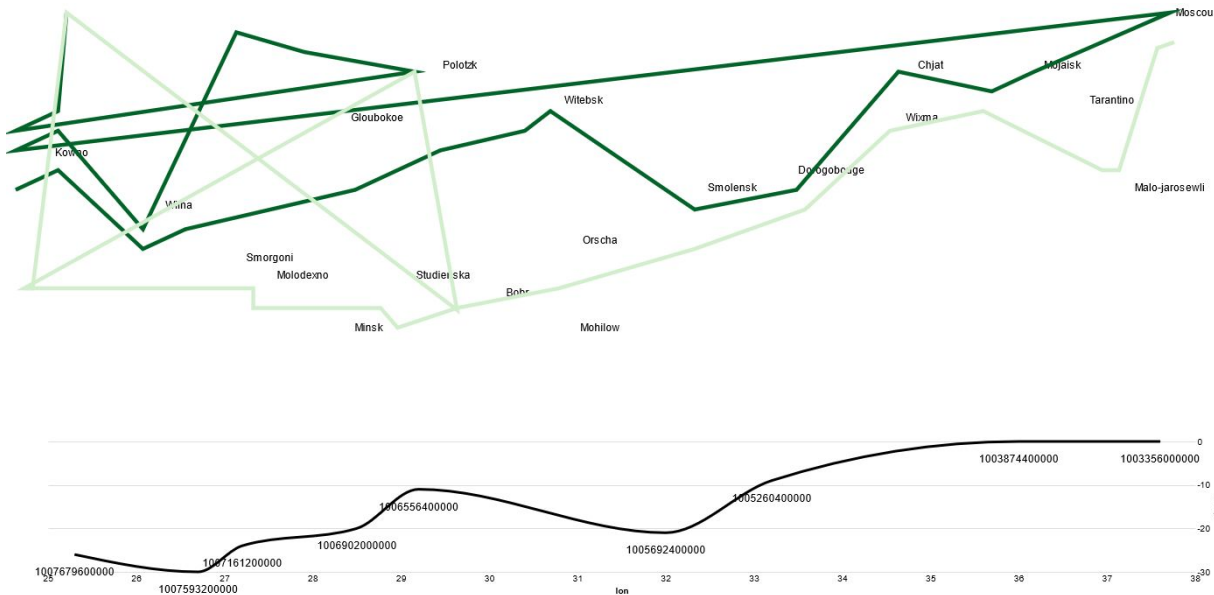


Image exported from Lyra1 example page

Lyra 2

- High learning curve
- Bugs
- Missing features
 - Binding to width
 - working bar chart?
 - Formatting input
- Conclusion?



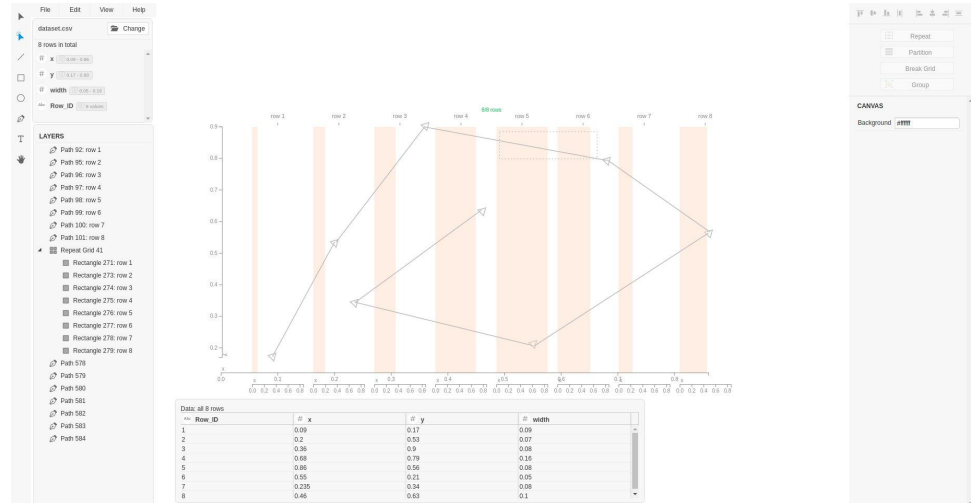
Lyra 2 - Bret Victor (and what does not work)

Live Demo

<https://youtu.be/TWLX0zBqCl4>

Data Illustrator

- Version 1.1
- Released May 30, 2018
- Research collaboration between University of Maryland, Georgia Institute of Technology, and Adobe Systems Inc.
- Web Application



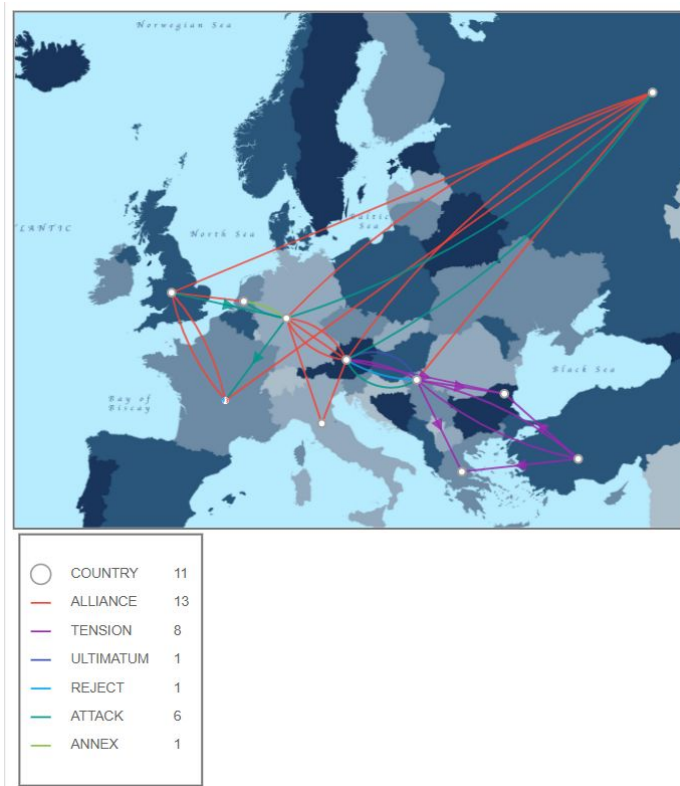
Data Illustrator

Live Demo

<https://youtu.be/qmX94ibplDo>

DataToon

- Storyboarding
- Pen/Touch interaction
- JSON
- No New Data
- Not Open Source



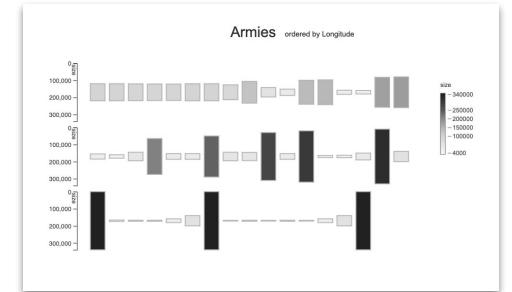
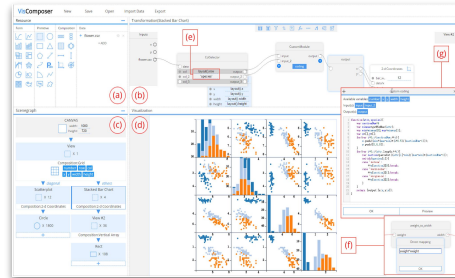
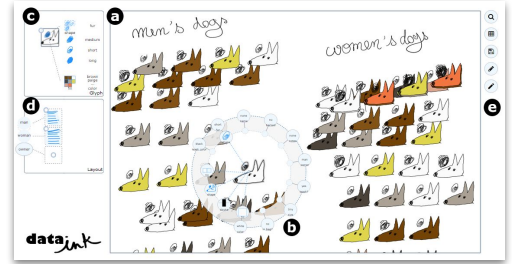
DataToon

Live Demo

<https://youtu.be/0z1kUoKWTsg>

Honorary Mentions

- DataQuilt
- DataINK
- VisComposer
- StructGraphics



Source(s):
<https://dataquilt.github.io>
<https://datainkresearch.github.io>
<https://doi.org/10.1016/j.visinf.2018.04.008>
<https://www.lri.fr/~fanis/StructGraphics/>

Recommendations

We would recommend:

- Charticulator 

We would recommend in certain cases:

- DataToon 

We would not recommend:

- Lyra2 → not nearly fully featured, bugs  ...

Thank you for your attention!



Questions?

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