

Quantitative Data Visualisation on Virtual Globes



Kadek
Satriadi



Barrett
Ens



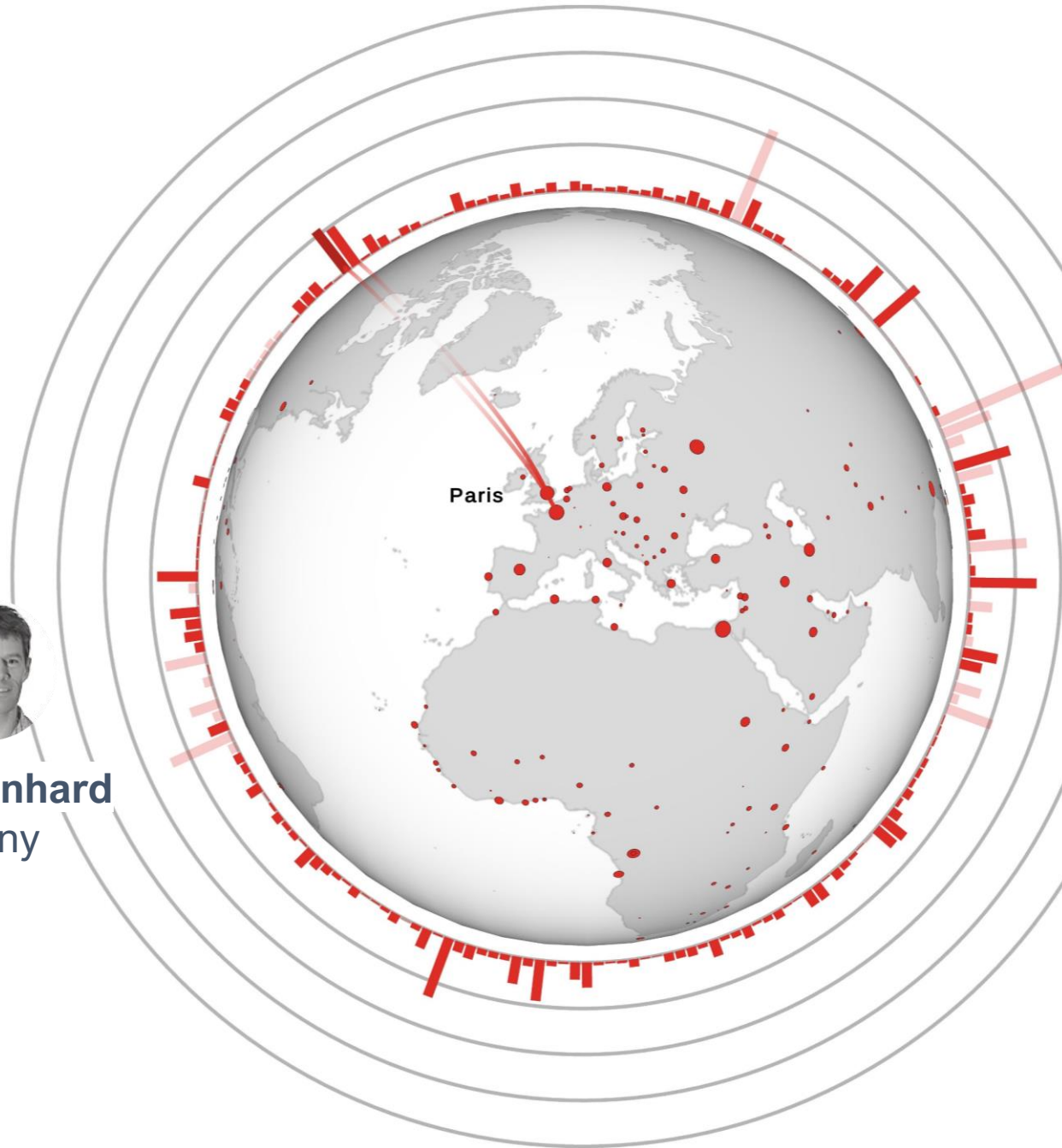
Tobias
Czauderna

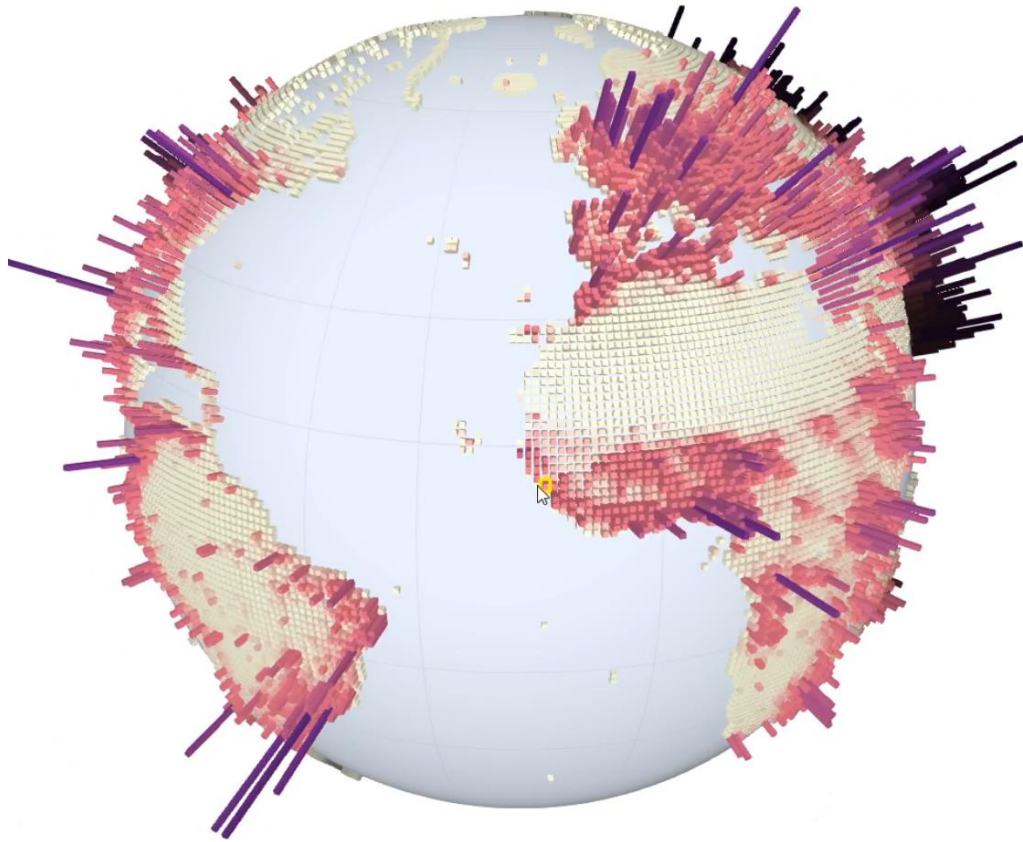


Maxime
Cordeil



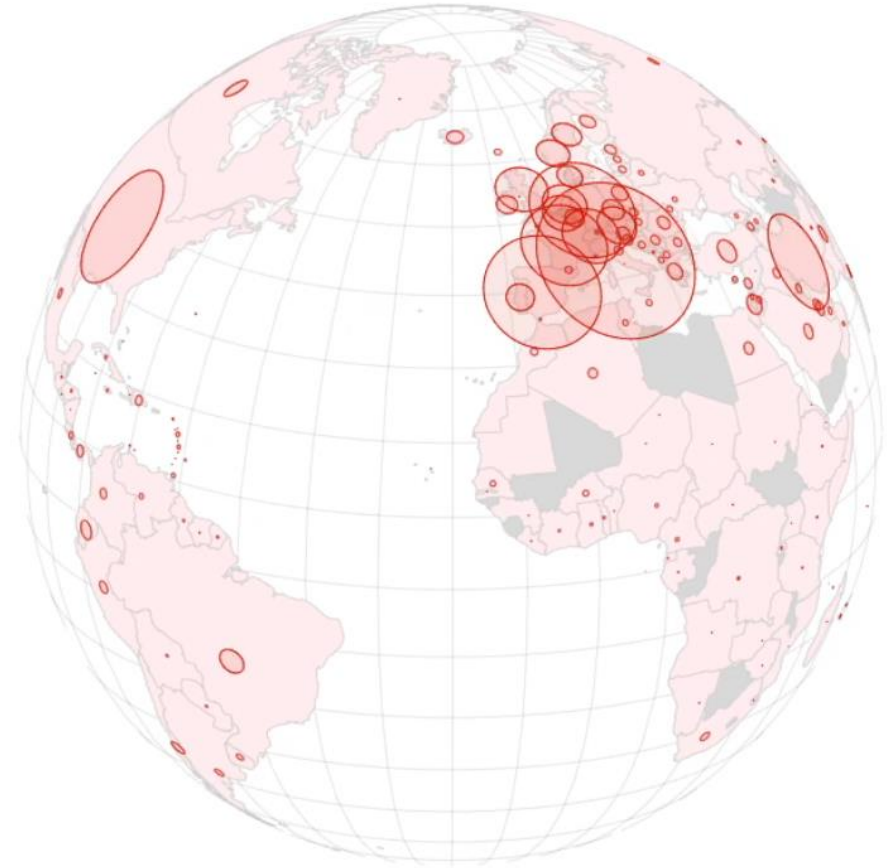
Bernhard
Jenny





World population count © Raluca Nicola.

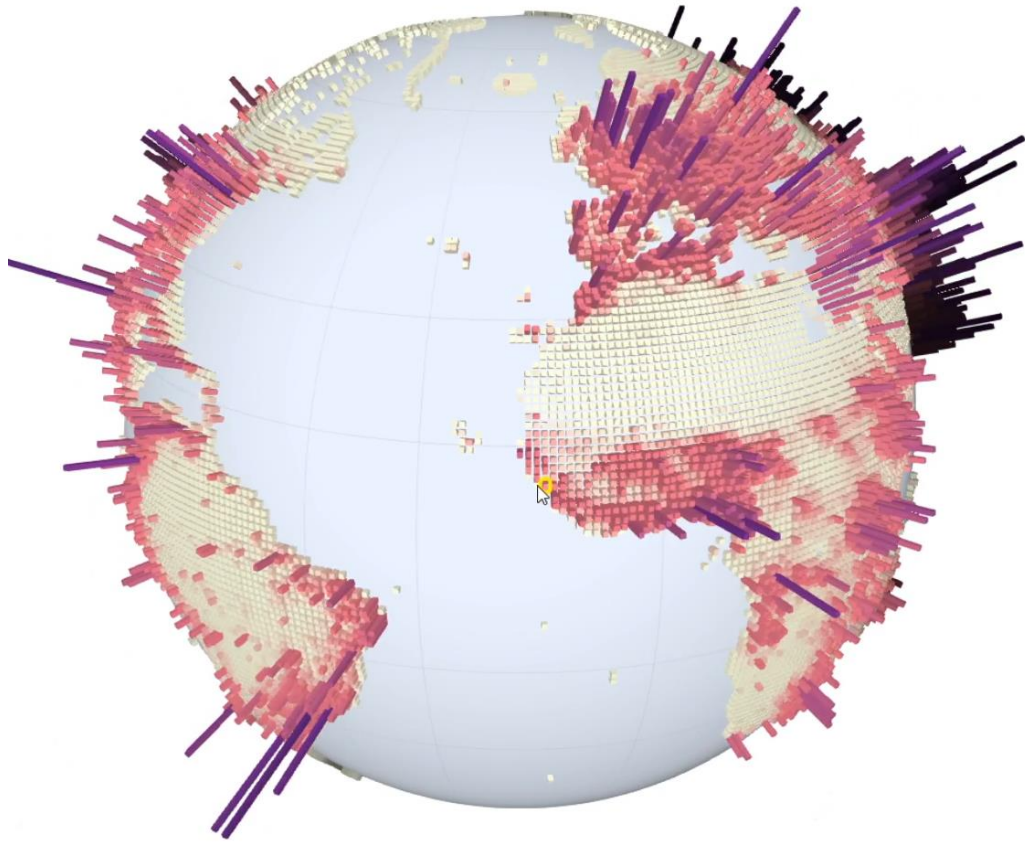
Source: https://ralucanicola.github.io/JSAPI_demos/world-population/



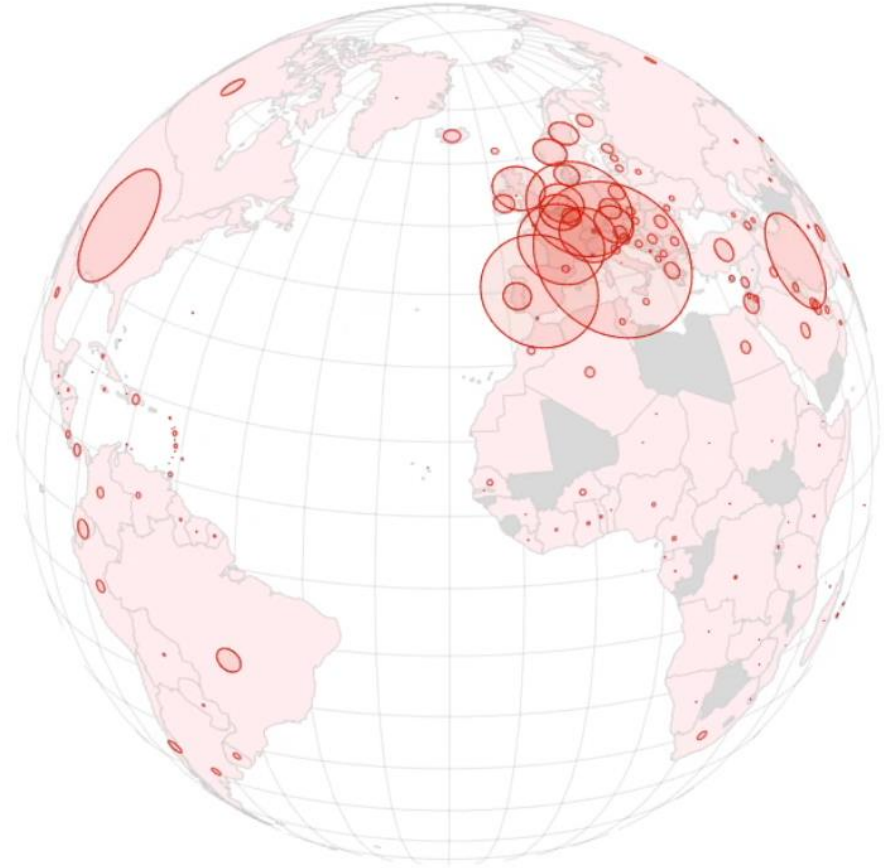
**How coronavirus spread across the globe – visualized ©
Seán Clarke, Antonio Voce, Pablo Gutiérrez and Frank
Hulley-Jones.**

Source: <https://www.theguardian.com/how-coronavirus-spread-across-the-globe-visualised>



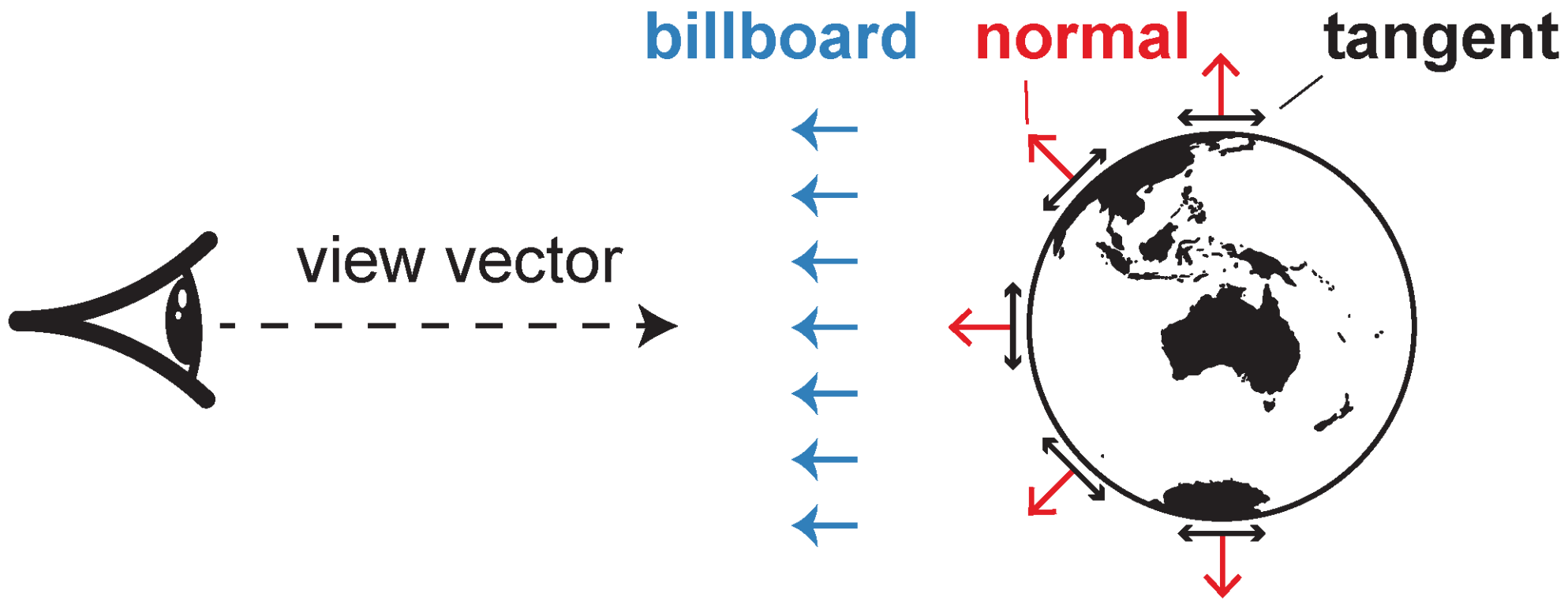


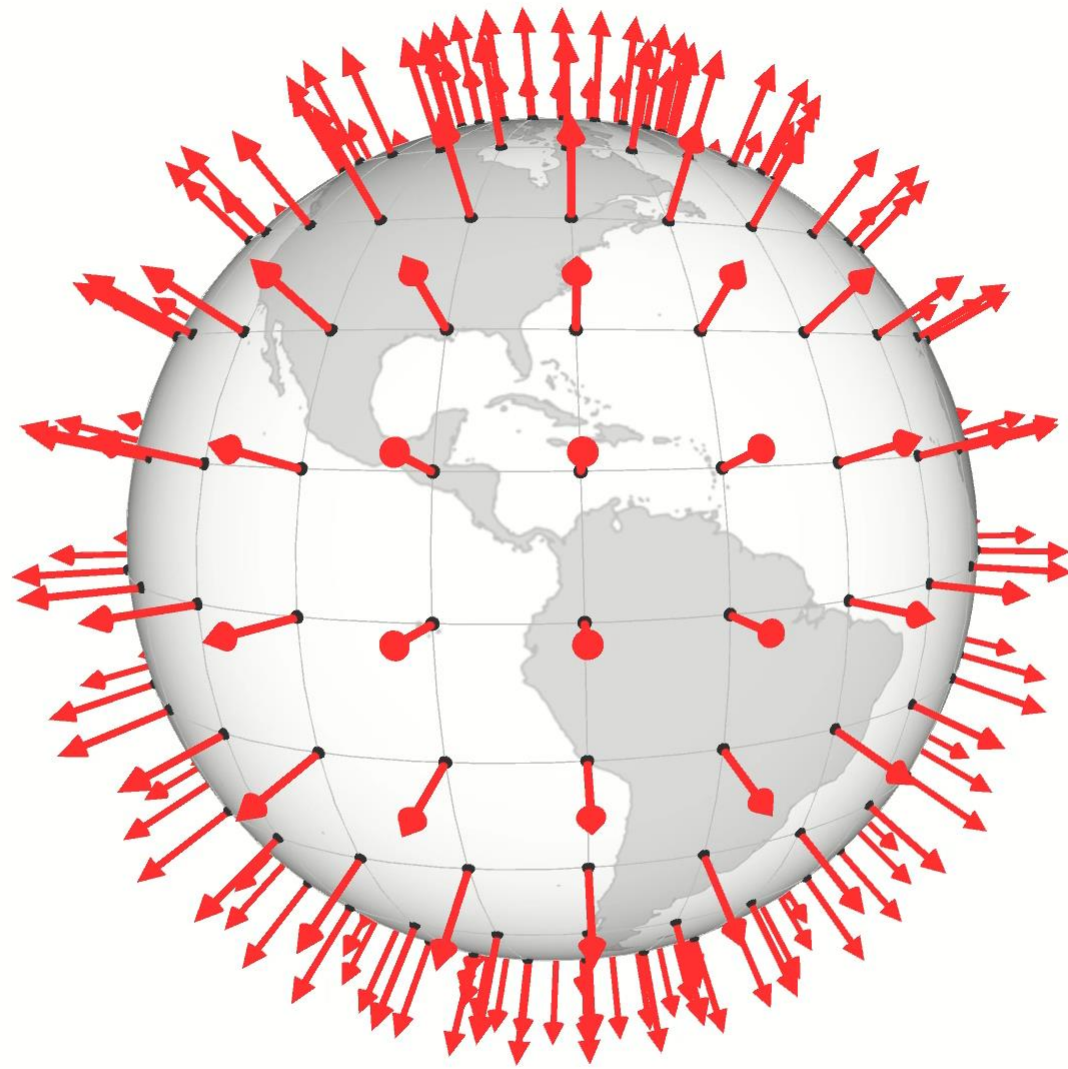
Length-proportional



Area-proportional

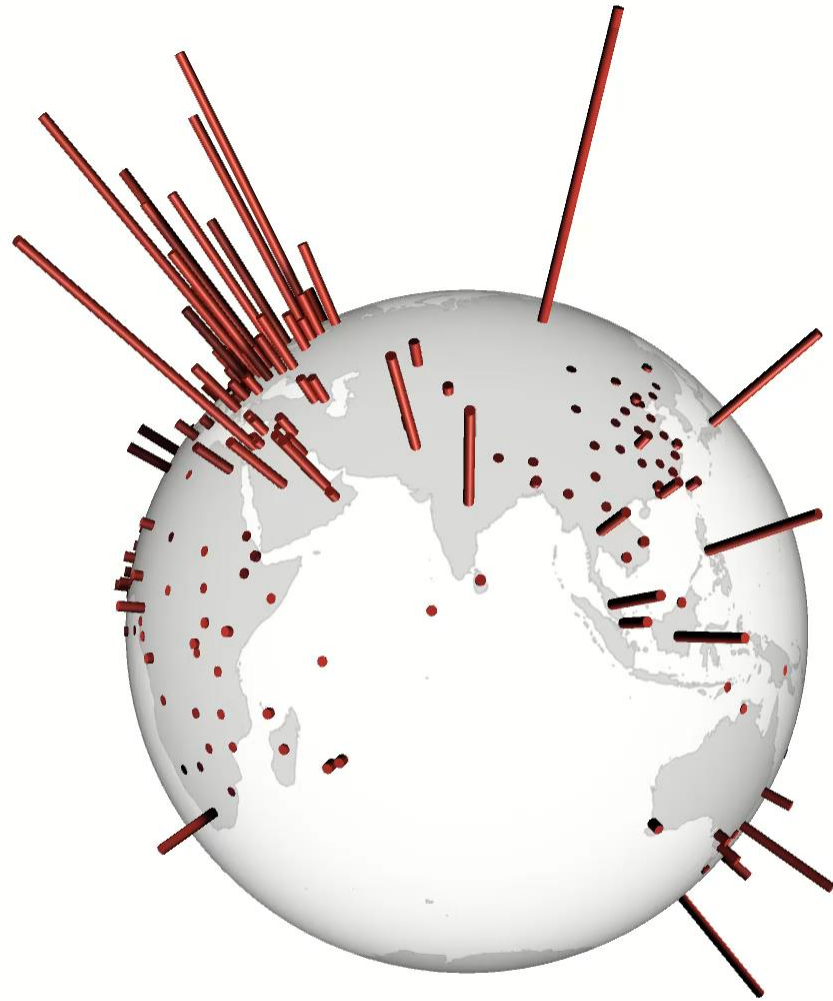






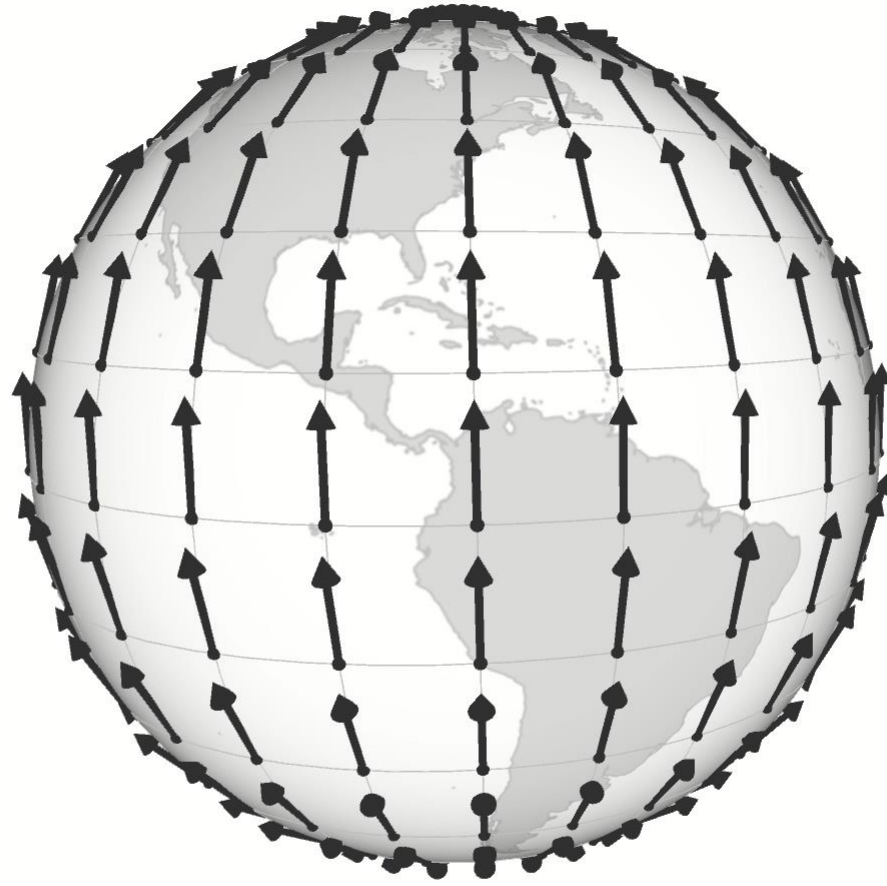
Normal Vectors





Normal Bars





Tangent Vectors



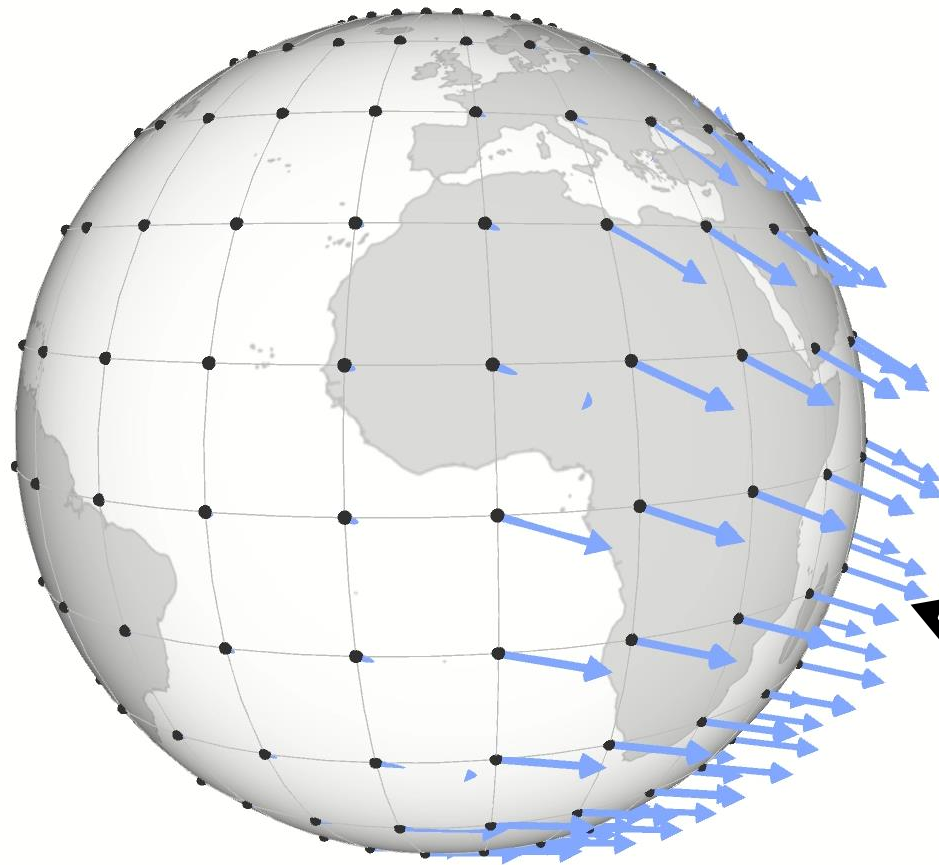


Tangential Circles

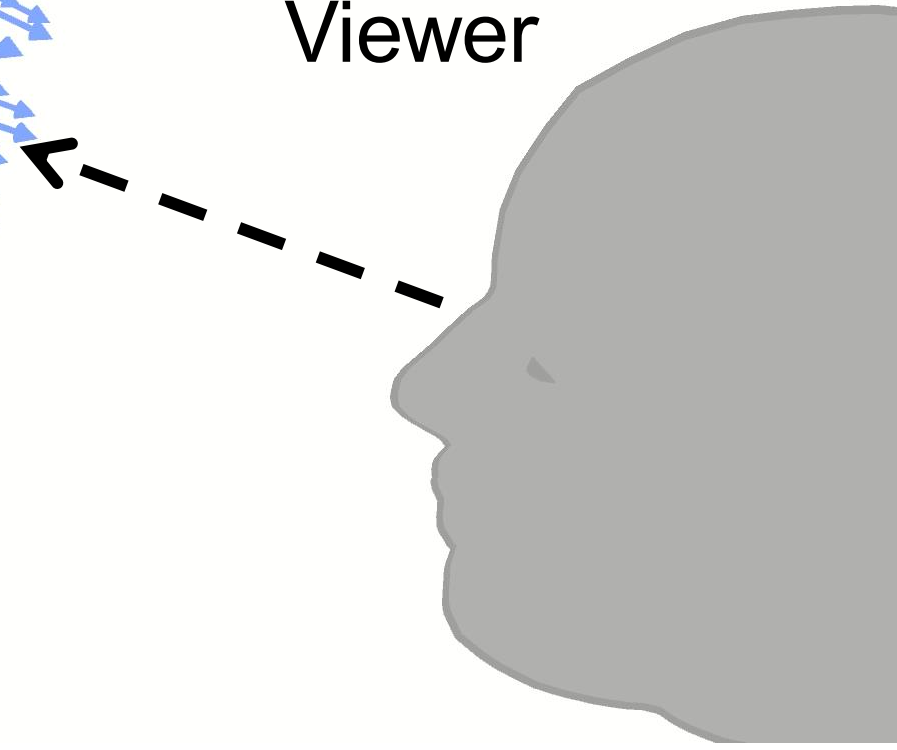


Tangential Bars



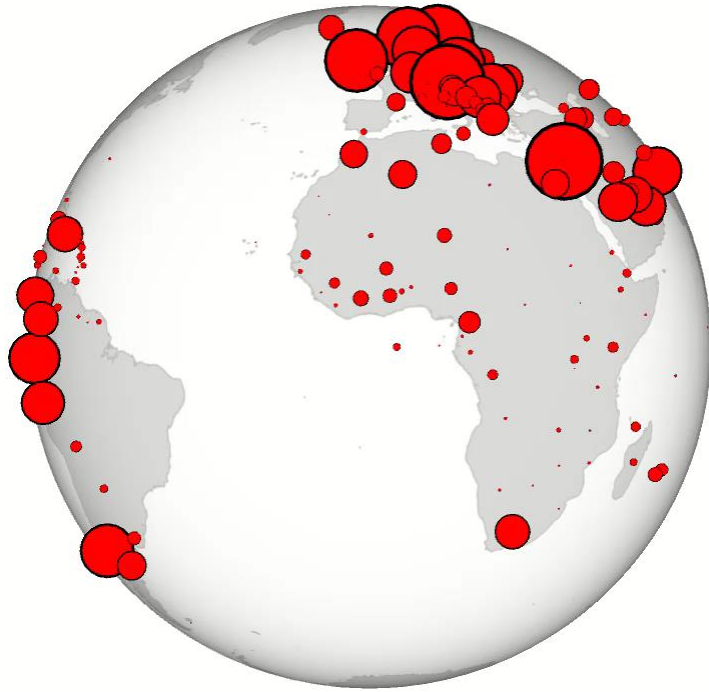


Viewer



Billboard Vectors





Billboarded Circles

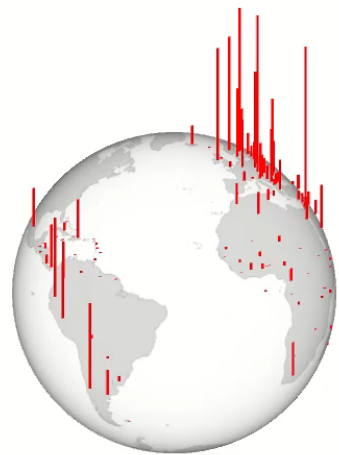


Billboarded Bars

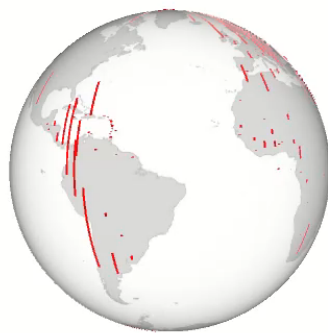




Normal Bars



Billboarded Bars



Tangential Bars



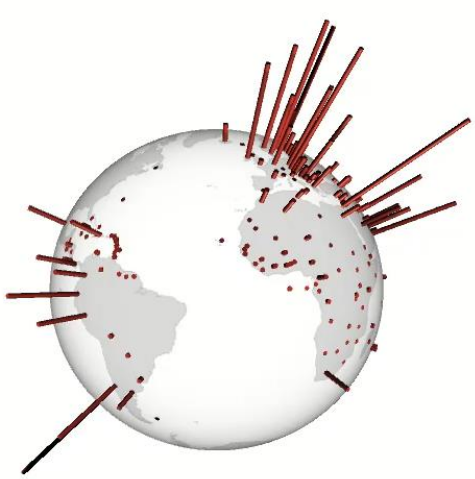
Billboarded Circles



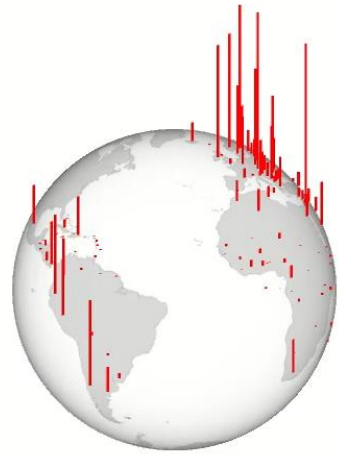
Tangential Circles



No differences in accuracy



Normal Bars



Billboarded Bars



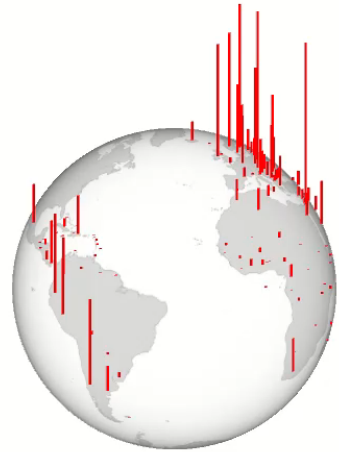
Tangential Bars



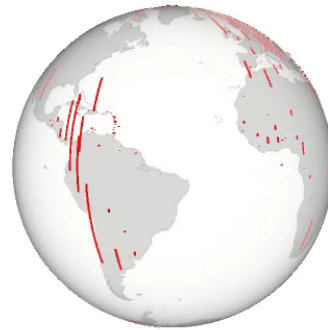
No differences in accuracy



Normal Bars

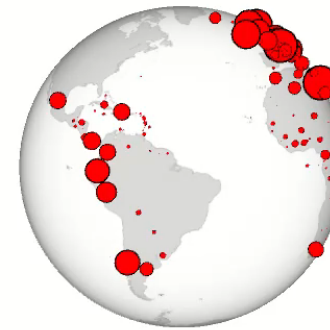


Billboarded Bars



Tangential Bars

Different accuracy



Billboarded Circles



Tangential Circles



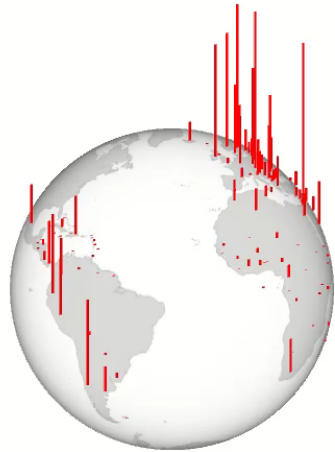
Most
accurate

Less
accurate

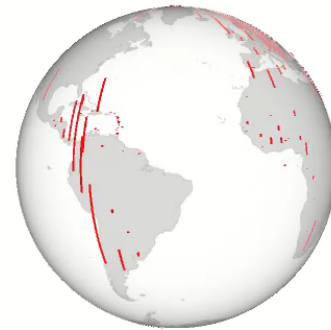
Least
accurate



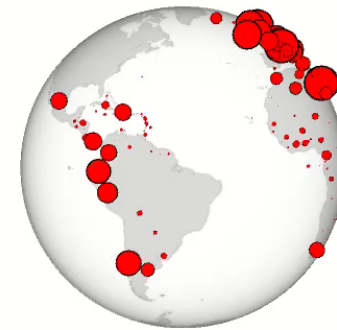
Normal Bars



Billboarded Bars



Tangential Bars

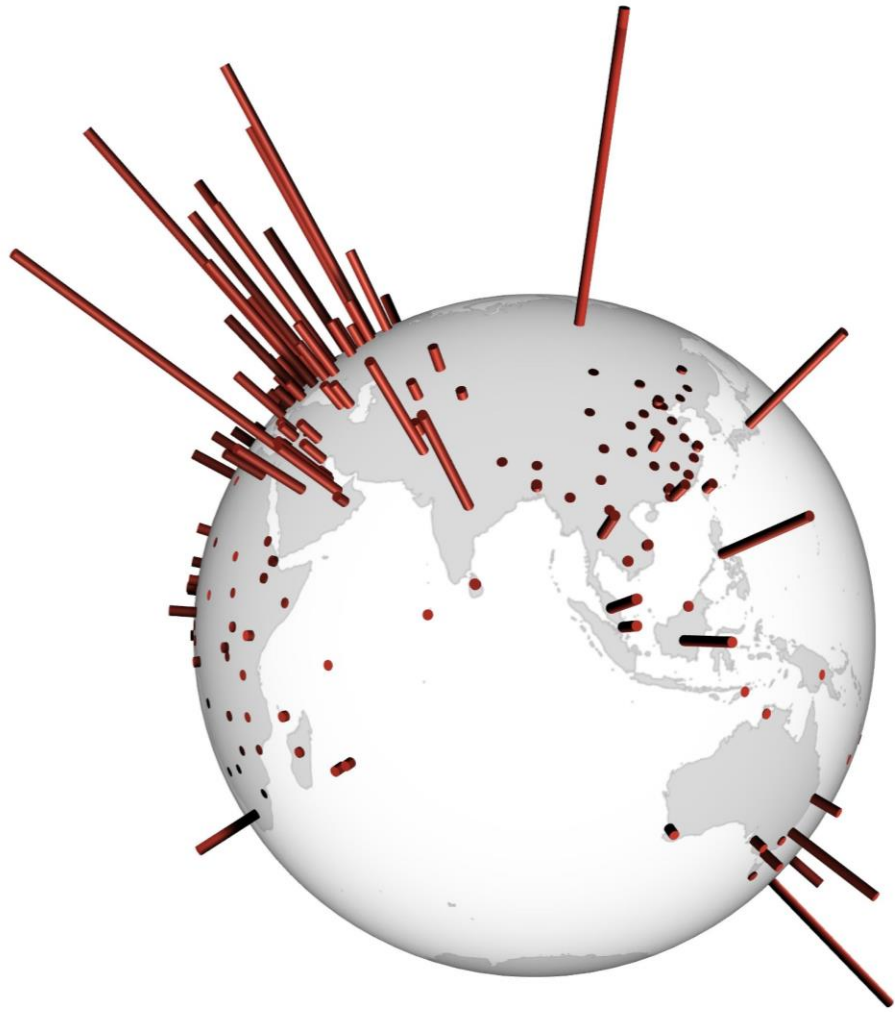


Billboarded Circles



Tangential Circles





Normal Bars



Tangential orientation increases perceived mental load



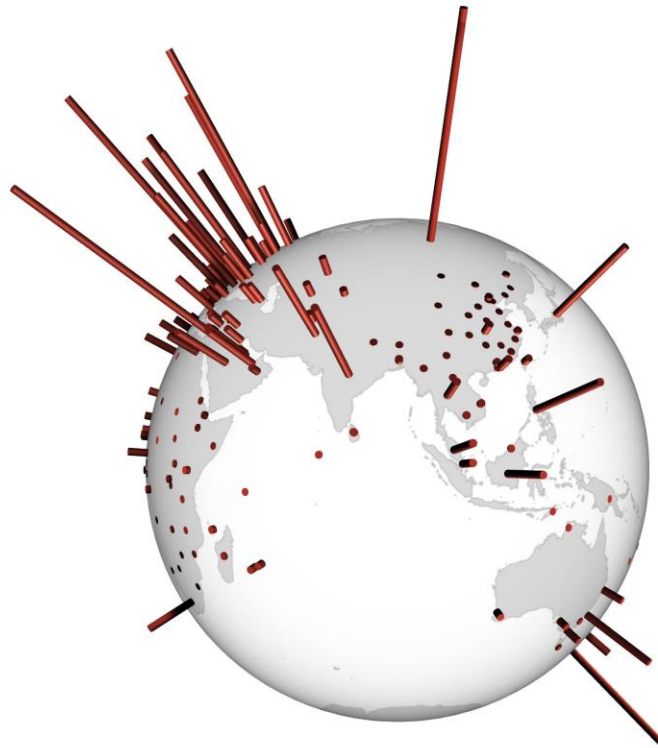
Tangential Circles



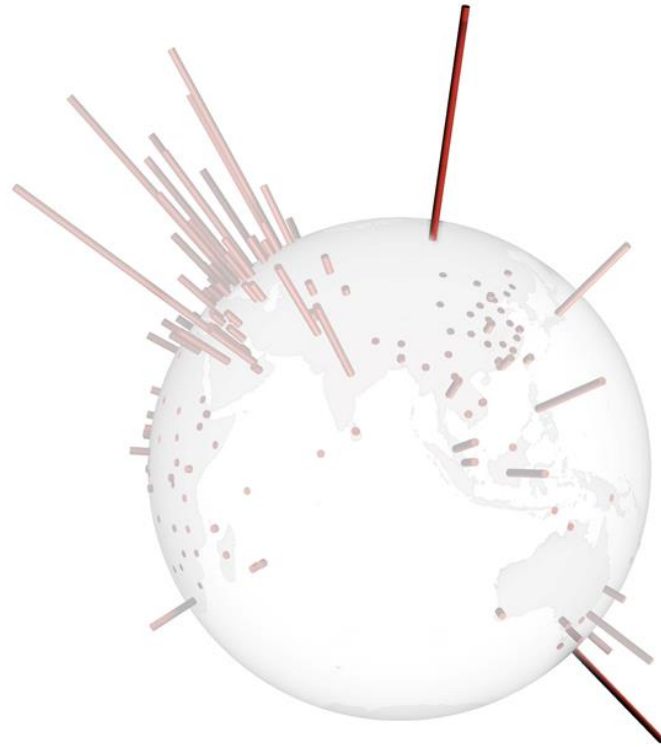
Tangential Bars



Exploring a new design



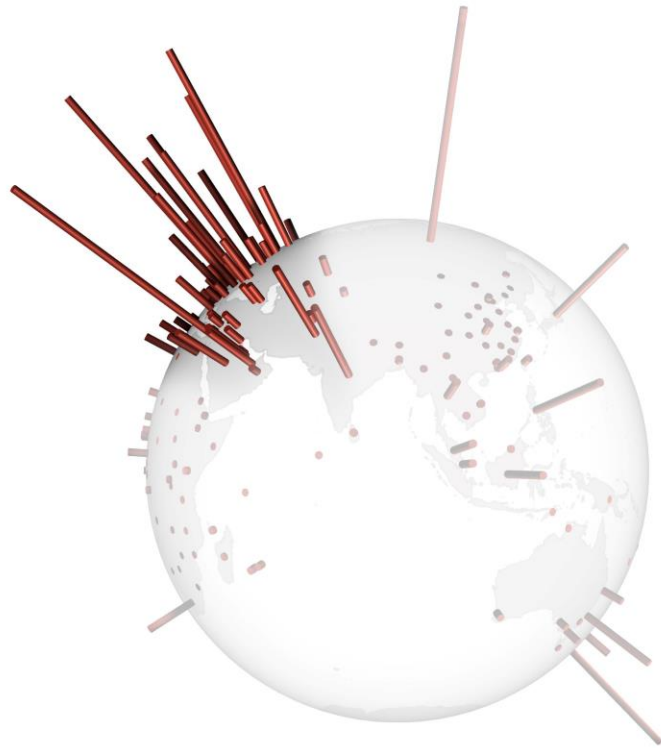
Exploring a new design



arrange bars on the horizon



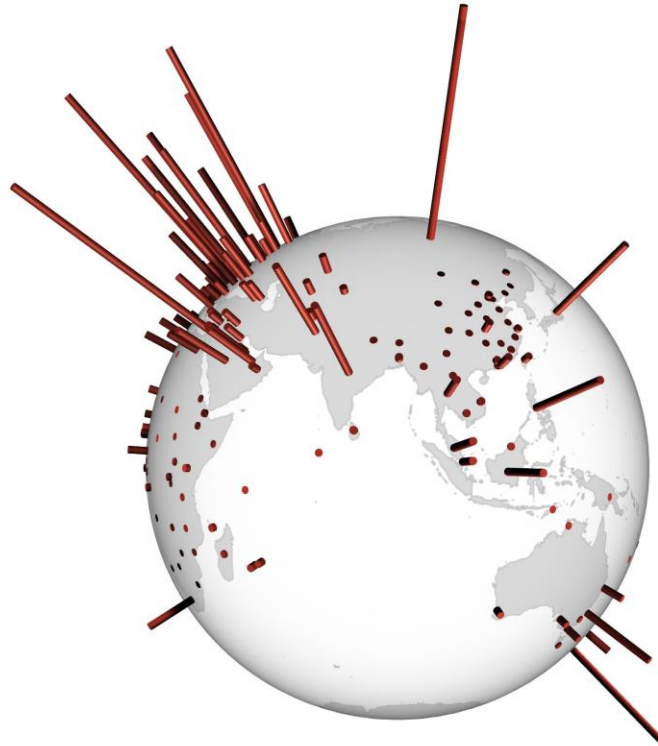
Exploring a new design



minimise occlusions



Exploring a new design

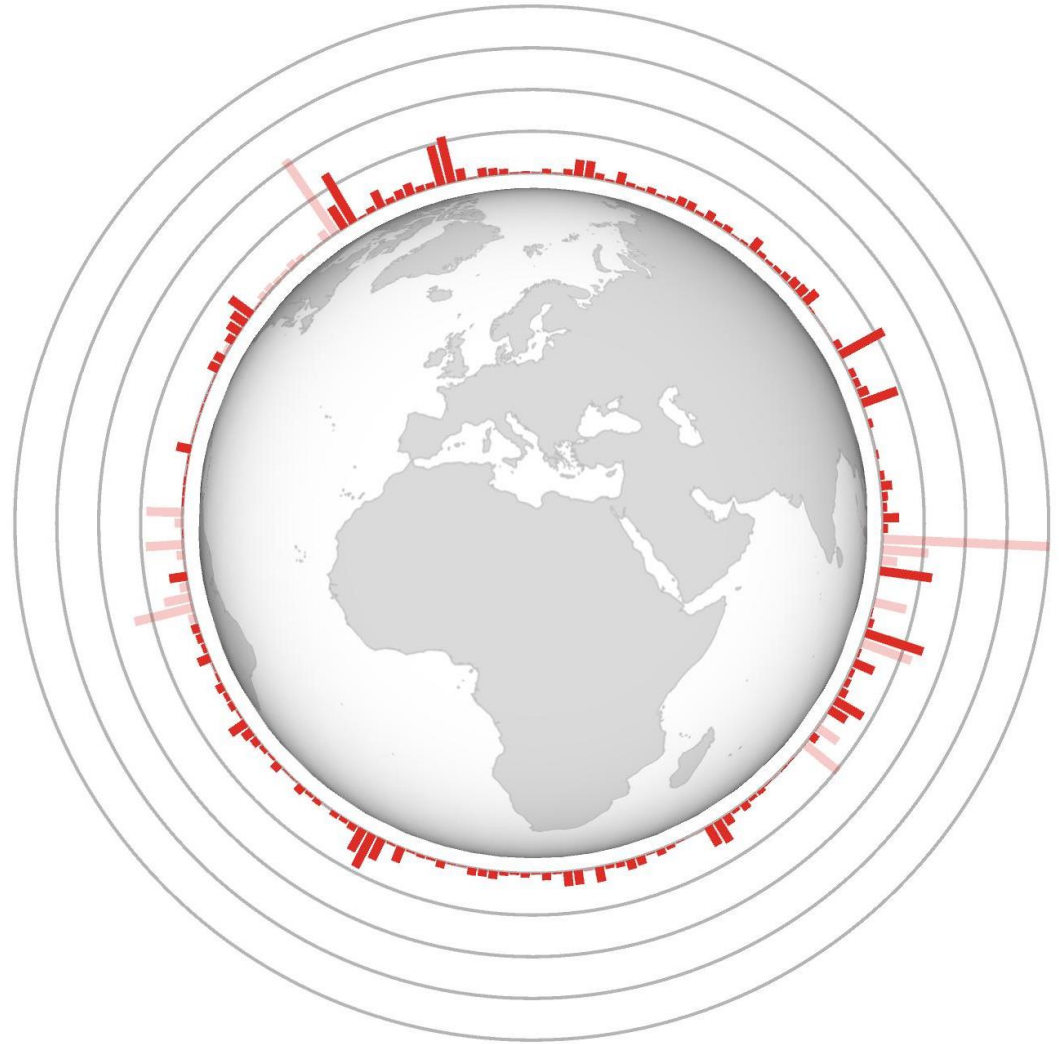


show hidden values



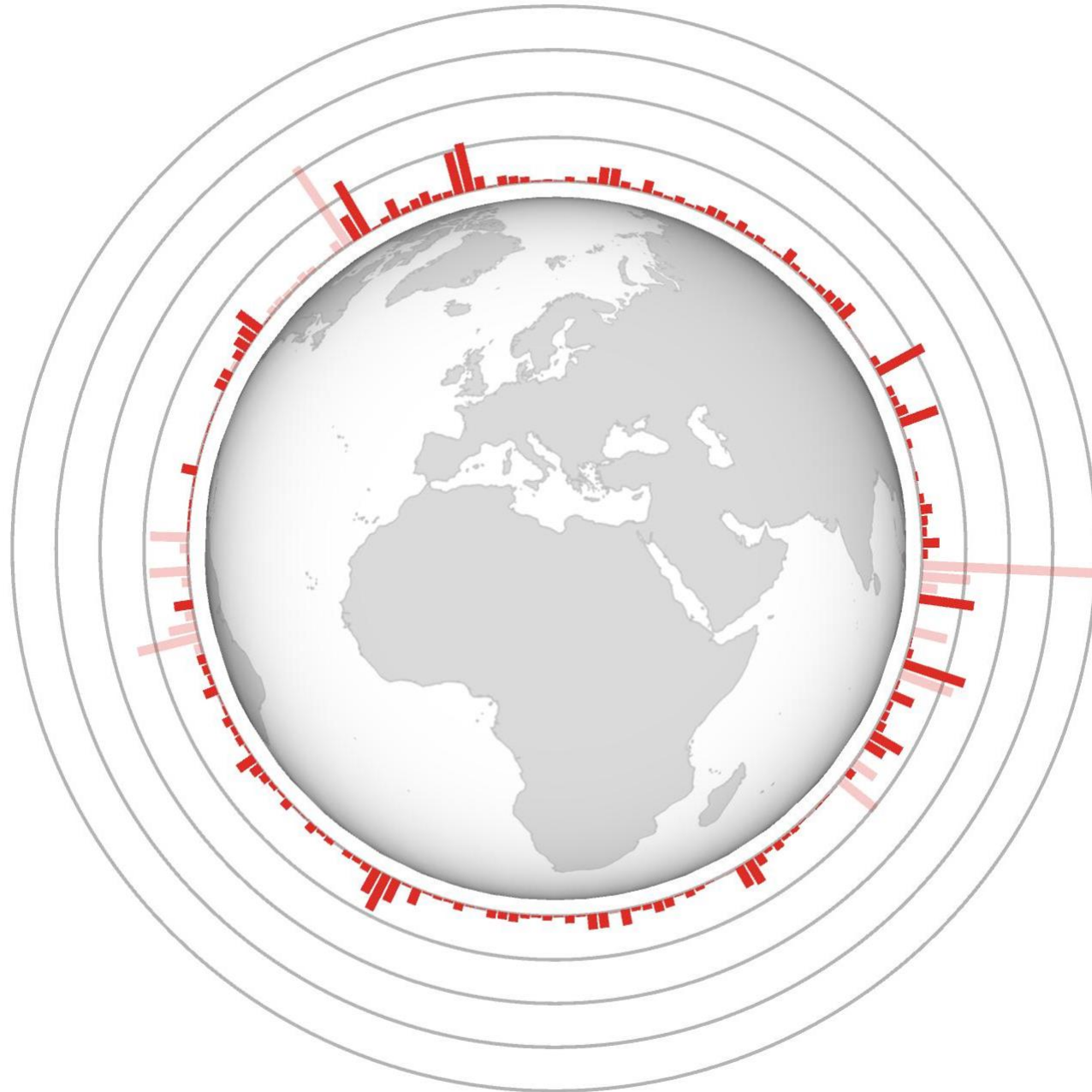


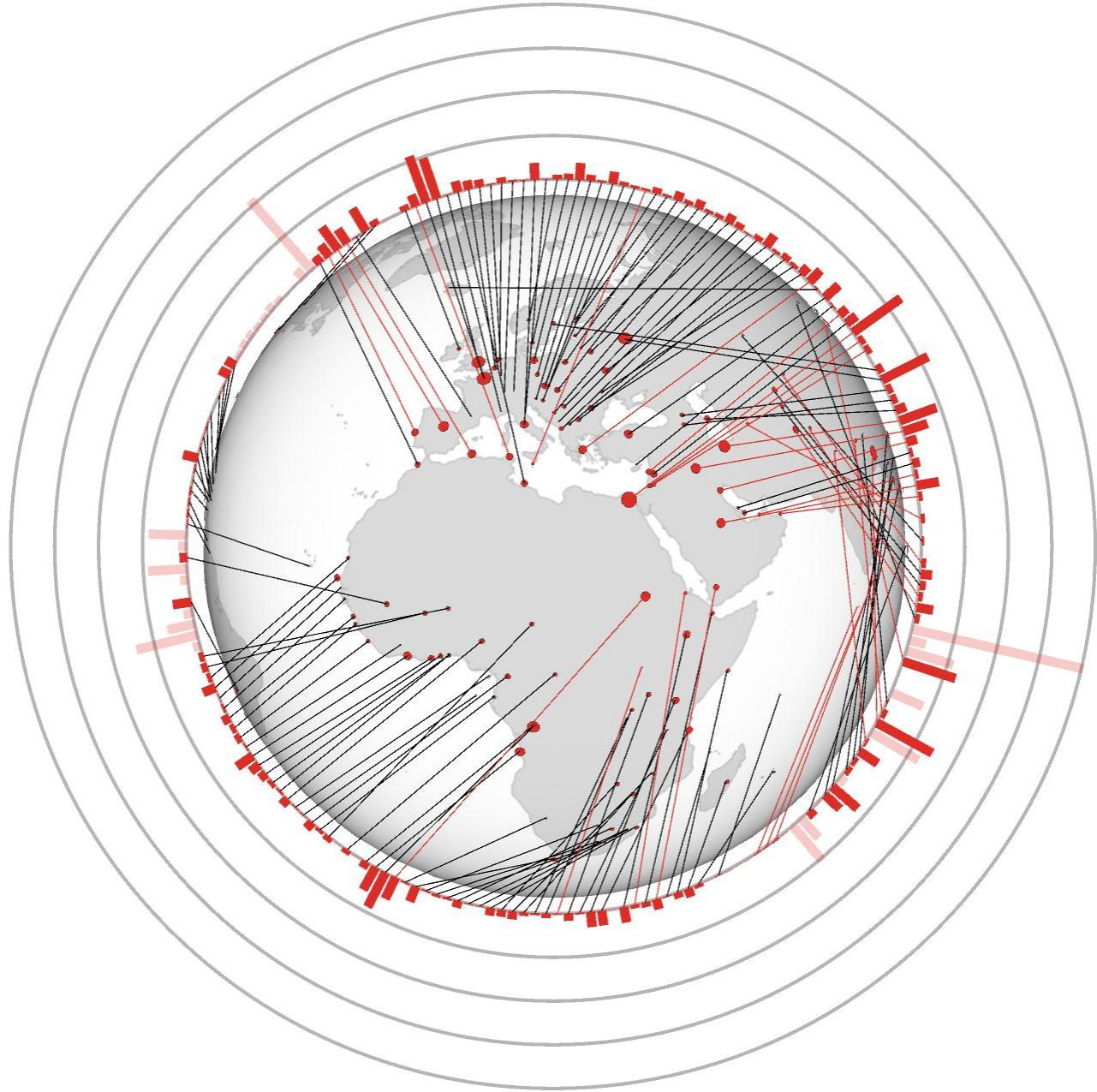
Globe



Geoburst







Geoburst

City population visualisation.

Properties

Link size: None Thin Tick

Link alpha: Solid Fading

Link type: Curve Straight

Radial size: Half Full

Thickness: Small Medium Large

Interactions

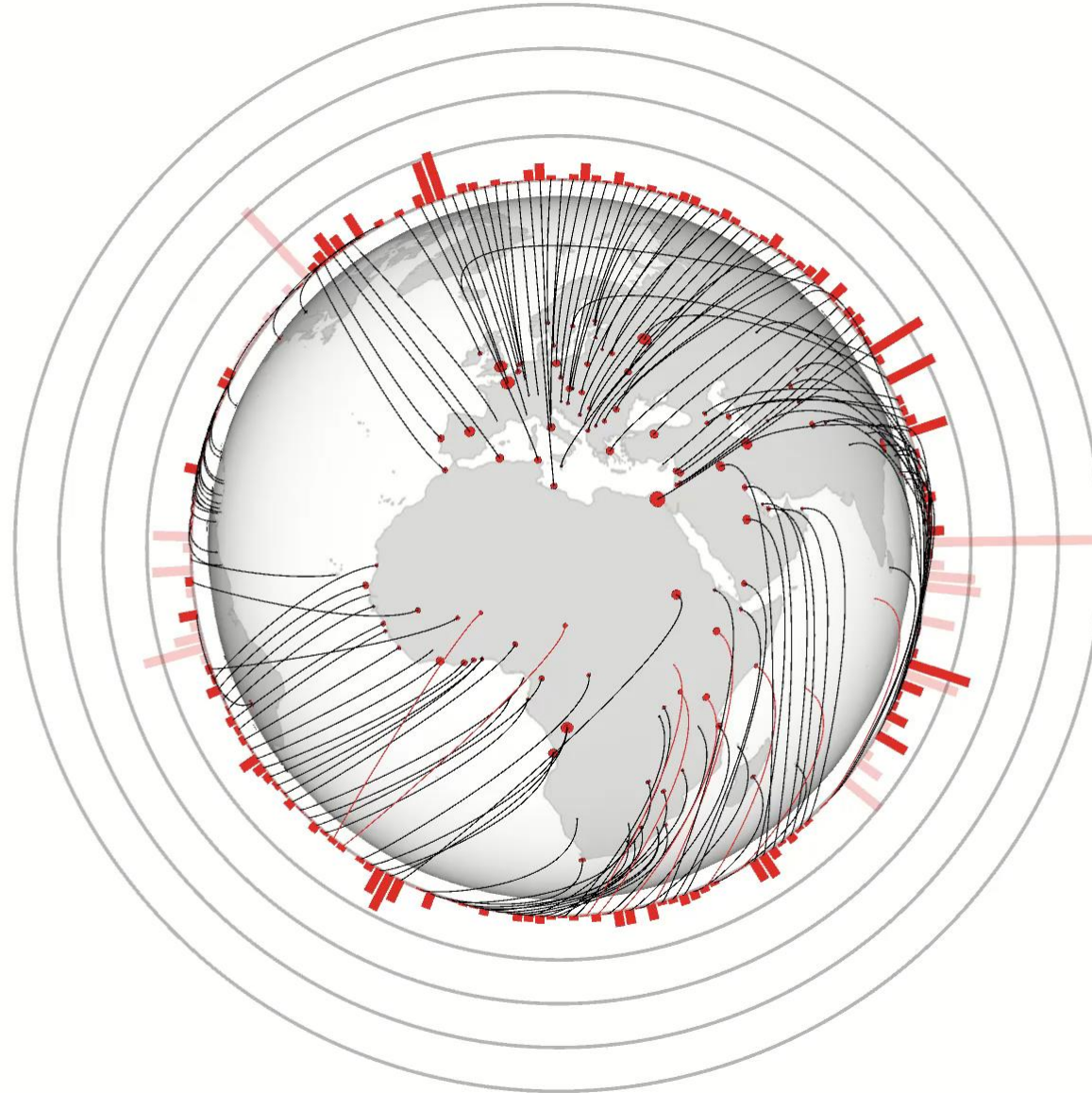
Freeze link:
Double click on the point or bar.

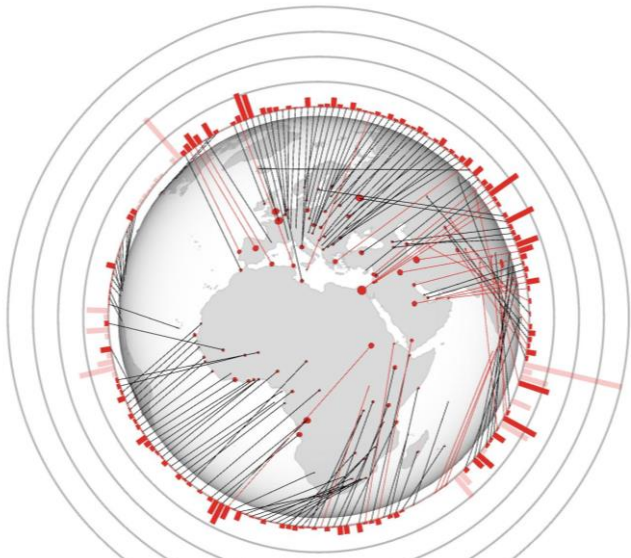
Clear link(s):
Double click the frozen link.
Double click the empty area.

Rotate to point:
Double click the faded bar.

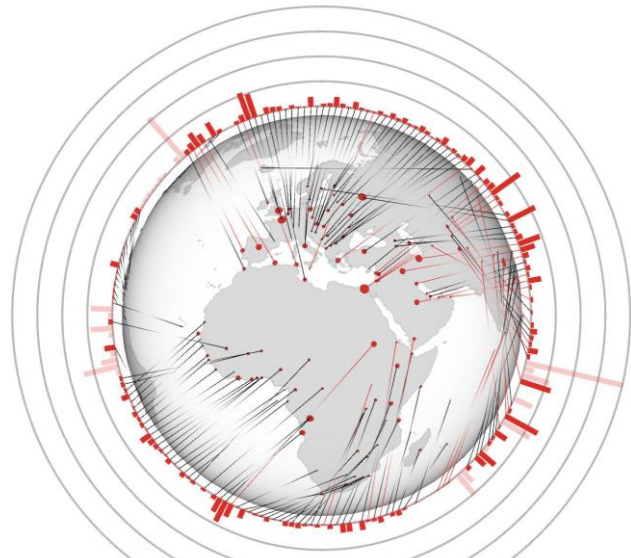
Zoom:
Mouse scroll.

HIDE MENU

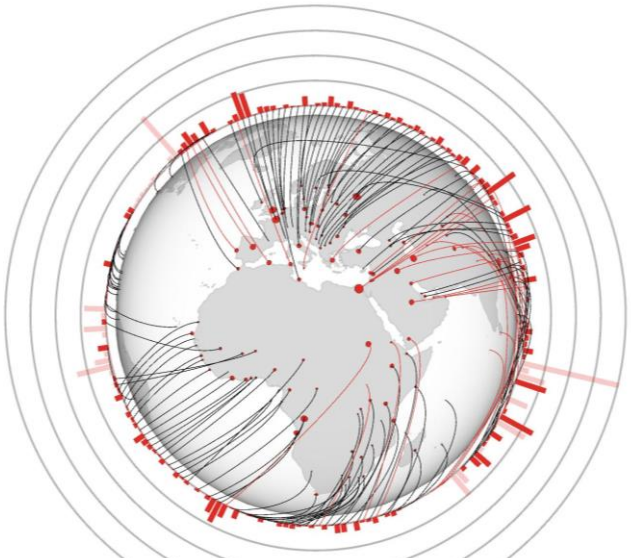




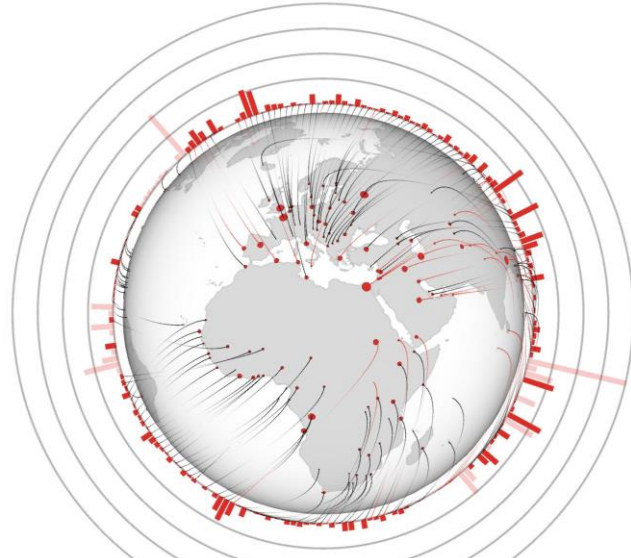
Straight Solid



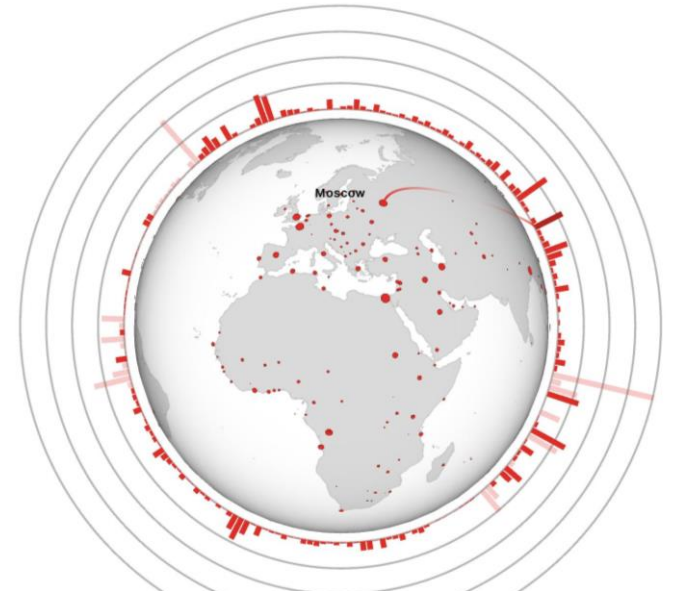
Straight Faded



Curved Solid

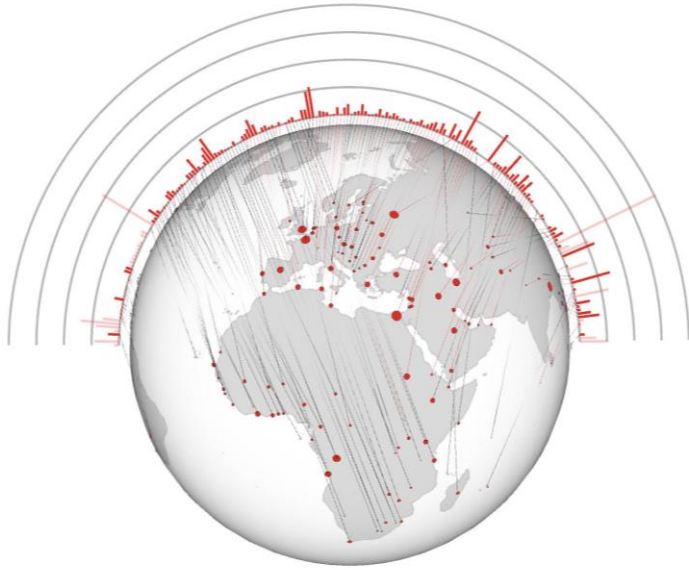


Curved Faded

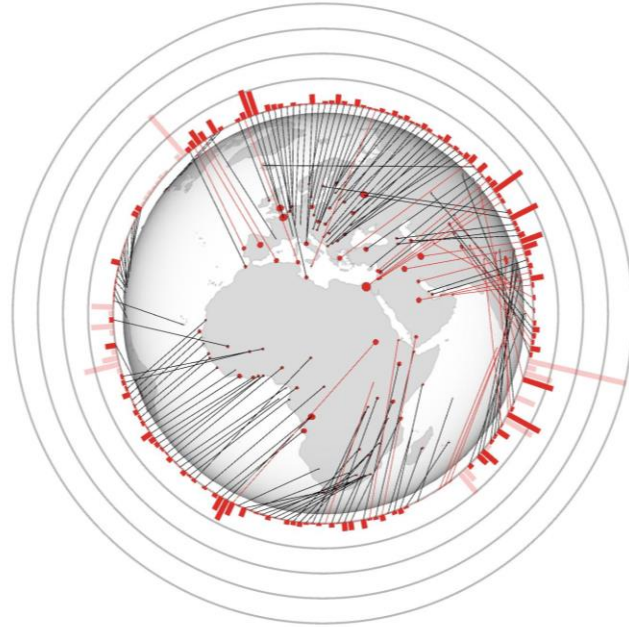


On Demand

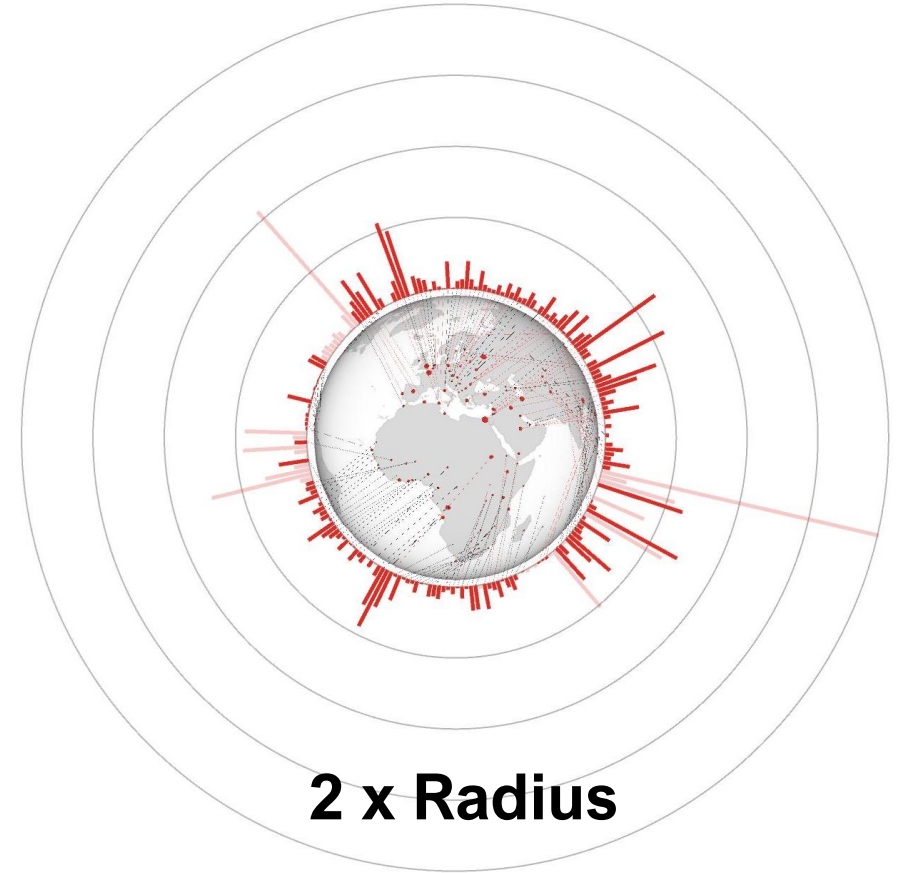




Half Circle

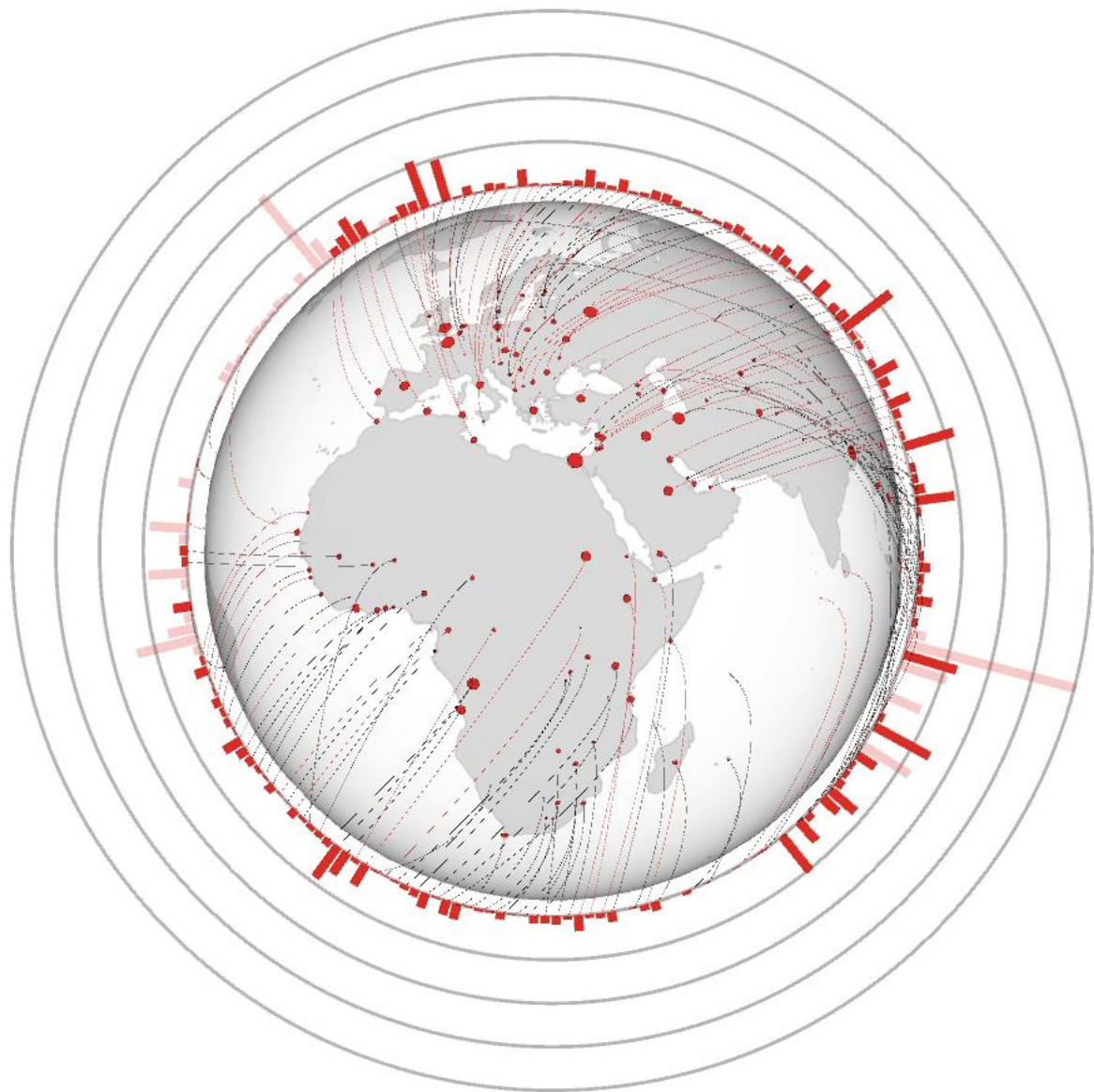


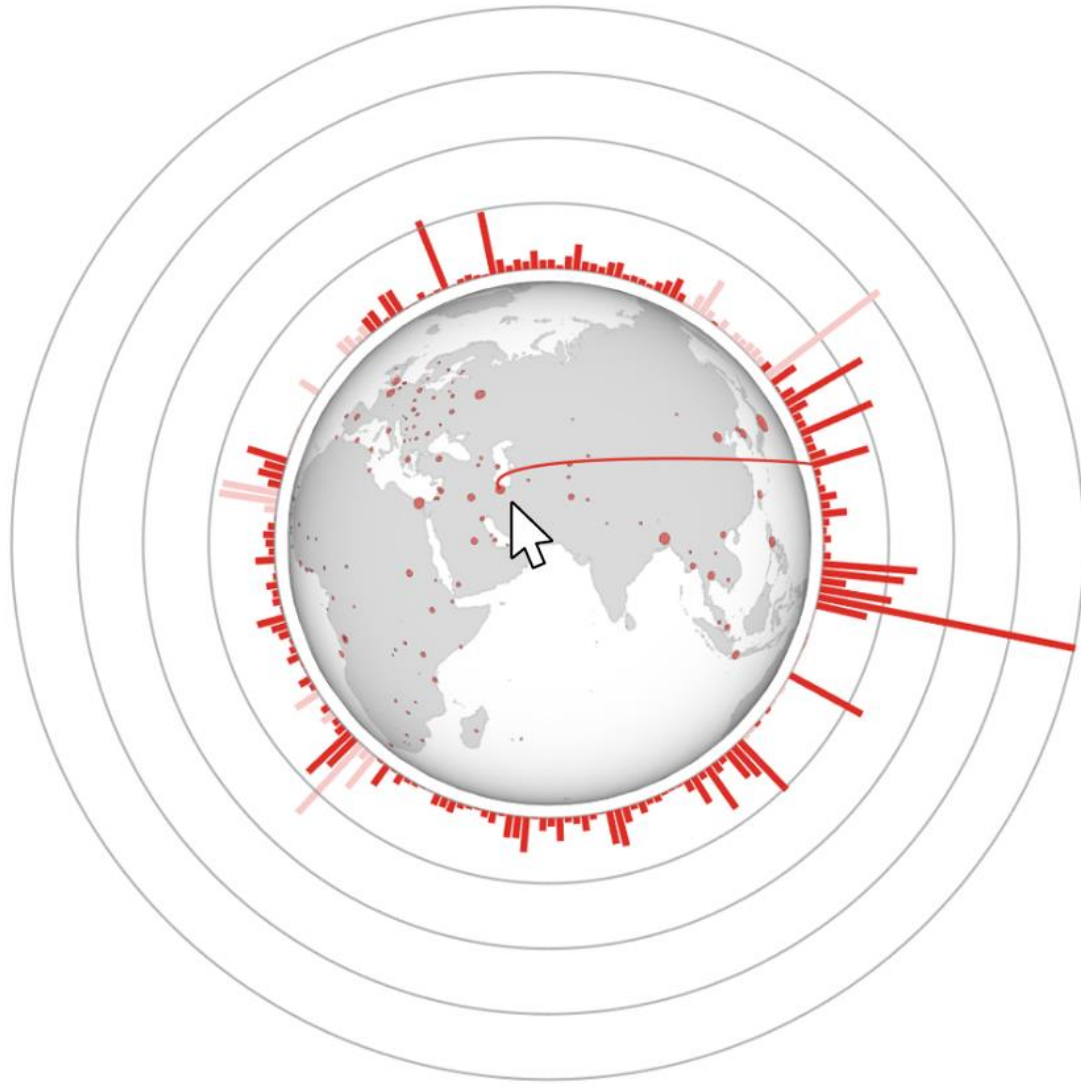
0.5 x Radius



2 x Radius







Preferred Geoburst



Our vision of future design
(illustration only)



Quantitative Data Visualisation on Virtual Globes

Project page:

<https://kadeksatriadi.com/geoburst>

Contact:

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