The code is available at: https://github.com/EduardoVernier/alternative-metrics
Latex: https://github.com/EduardoVernier/dynamic-treemap-latex/

Metrics

1 - AspectRatio_c = min(width_c, height_c) / max(width_c, height_c)

- *DeltaVis_c_t is the distance traveled by the four corners of a cell between revisions t and t+1, divided by 4 time the base rectangle's diagonal.*
- *DeltaData_c_t is the absolute difference of relative weight of a cell between revisions t and t+1.*

2 - Ratio_c_t = (1 - DeltaVis_c_t) / (1 - DeltaData_c_t)
3 - Diff_c_t = 1 - | DeltaVis_c_t - DeltaData_c_t |
4 - Pearson = make a scatter with points (DeltaVis, DeltaData) for all cells and time-steps and compute pearson correlation coefficient.
5 - UnavoidableMovement_c_t = uses an optimization method to find what is the minimal distance that the corners of a cell must travel for the cell to reach a new area value (let's call it Mininal_c_t). Then computes 1 - (DeltaVis_c_t - Minimal_c_t).

Plots

Boxplots

Color meaning: Gray = 5% to 95% range. Green = 25% to 75% range. Black = median.
There are two variations: on where the x axis represents time, and other where revisions are sorted by median (has **-S** in the filename).
ar-boxplots
delta-diff-boxplots
delta-ratio-boxplots
unavoidable-boxplots
***mean-boxplots** - this is the average of metrics 2, 3 and 5.*

Matrices

For a given metric, gives the average value of that metric for all datasets and techniques.
There are four variations for each table indicated by the filename:
S = shared colormap between all datasets I = colormap is column (dataset) independent.
T = text inside the cells NT = no text in the cells.
ar-matrix
correlation-matrix
delta-diff-matrix
delta-ratio-matrix
unavoidable-matrix

Rank table
Horizontal bar chart indicating how many times a technique score first, second, etc rank for a certain metric or combination of metrics. There is one for aspect ratios alone and one that combines the 4 stability metrics.

Scatters
Scatter plot that shows the correlation between DeltaVis (y axis) and DeltaData (x axis). Alpha is slope of the regression line, beta the y offset, r is the Pearson correlation coefficient and s_e is the standard error
Remember to remove GIT.