

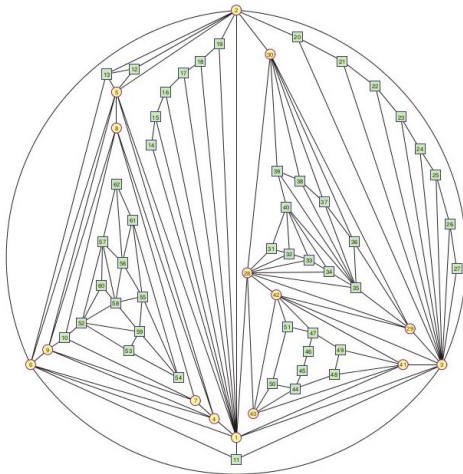
536E Graph Drawing

Will Evans

2018 Spring (also known as 2017W2)

Good ways to draw graphs?

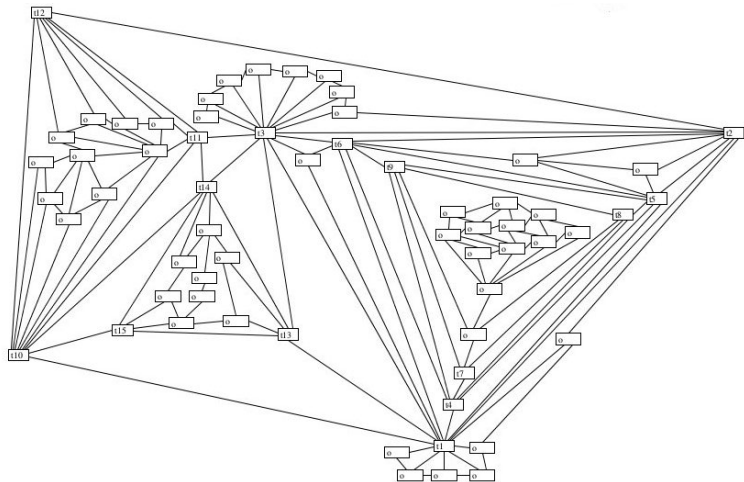
Energy minimization



Graph Drawing Contest 1995

Good ways to draw graphs?

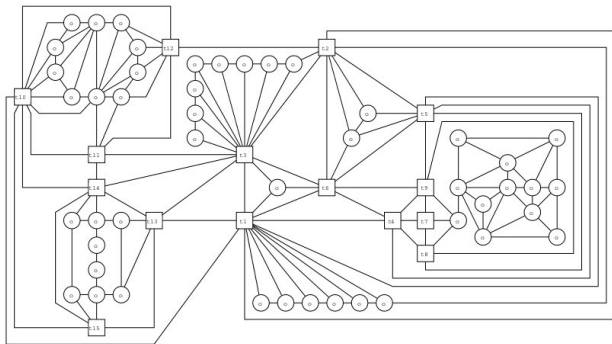
Local heuristics



Graph Drawing Contest 1995

Good ways to draw graphs?

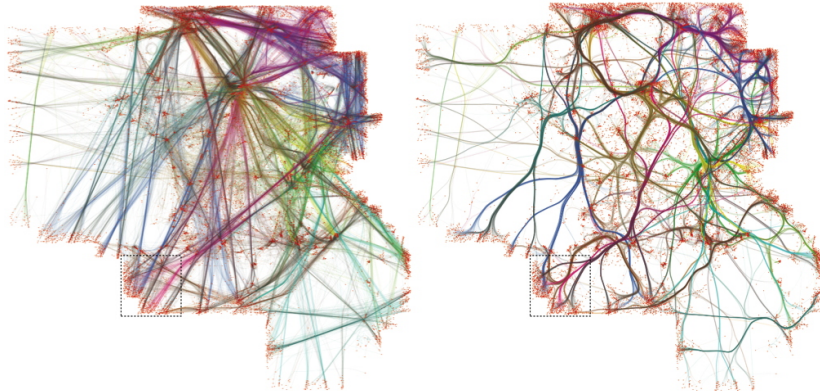
Orthogonal edges



Graph Drawing Contest 1995

Good ways to draw graphs?

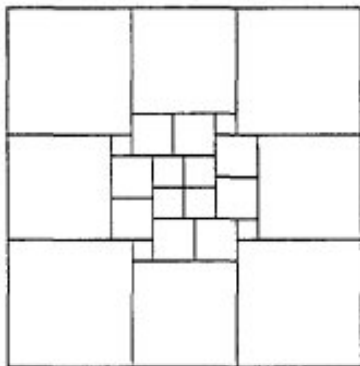
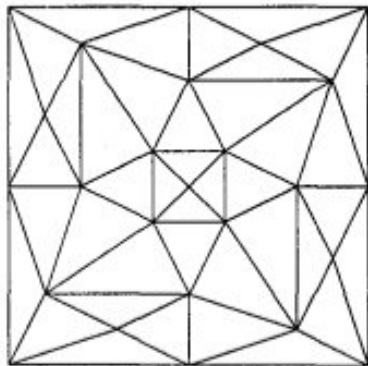
Skeletons/Flows



Skeleton-Based Edge Bundling for Graph Visualization, O. Ersoy et al. 2011

What graphs can be drawn in a certain way?

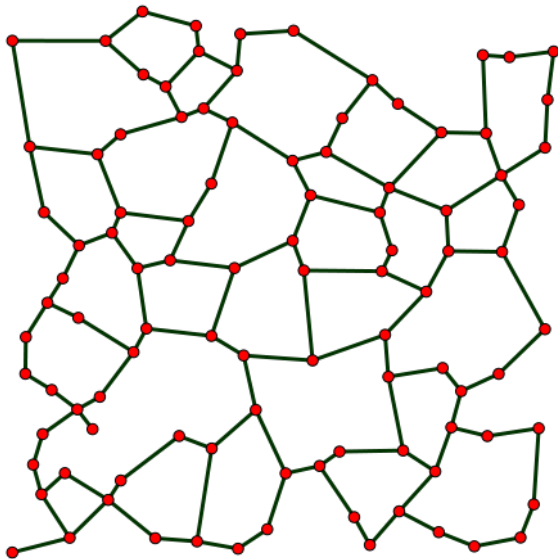
As contact of squares (or other shapes)



Square Tilings with Prescribed Combinatorics, O. Schramm 1993

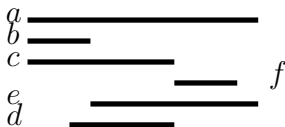
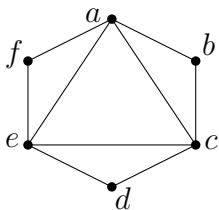
What graphs can be drawn in a certain way?

As “close” points



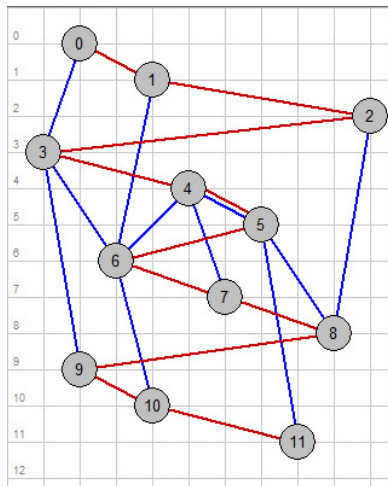
What graphs can be drawn in a certain way?

As visibility graphs between geometric objects



Restricted drawings

Drawing different graphs on the same points

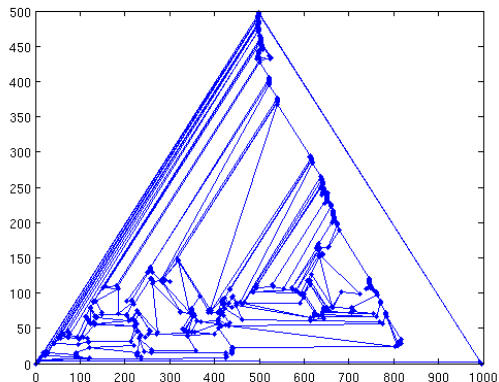


S. Kobourov 2003

Do “universal” point sets exist?

Restricted drawings

Drawing graphs on small grids



MatlabBGL

How small?

Graph Drawing

