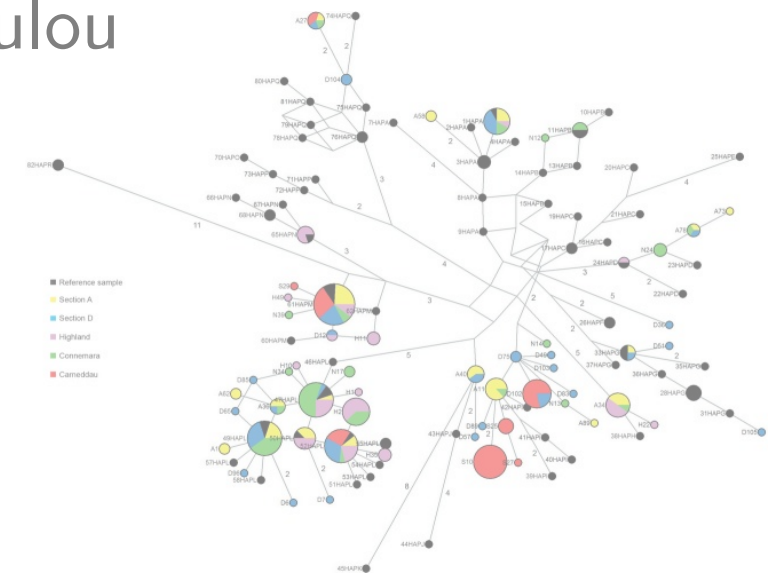
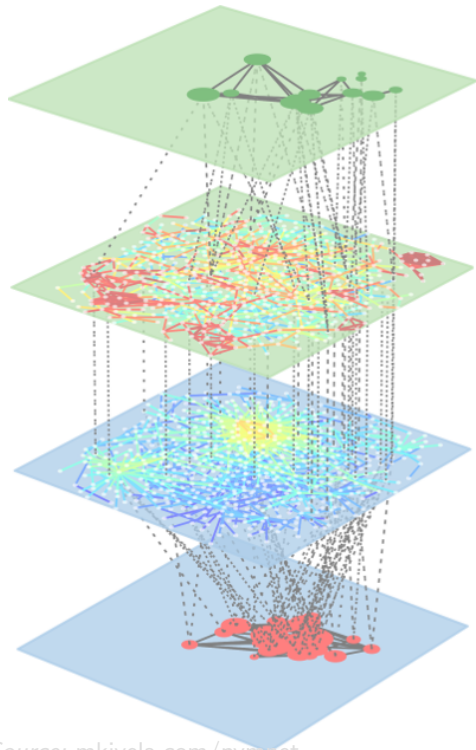


Visualisation of graphs

Introduction Examples

Antonios Symvonis · Chrysanthi Raftopoulou
Fall semester 2022

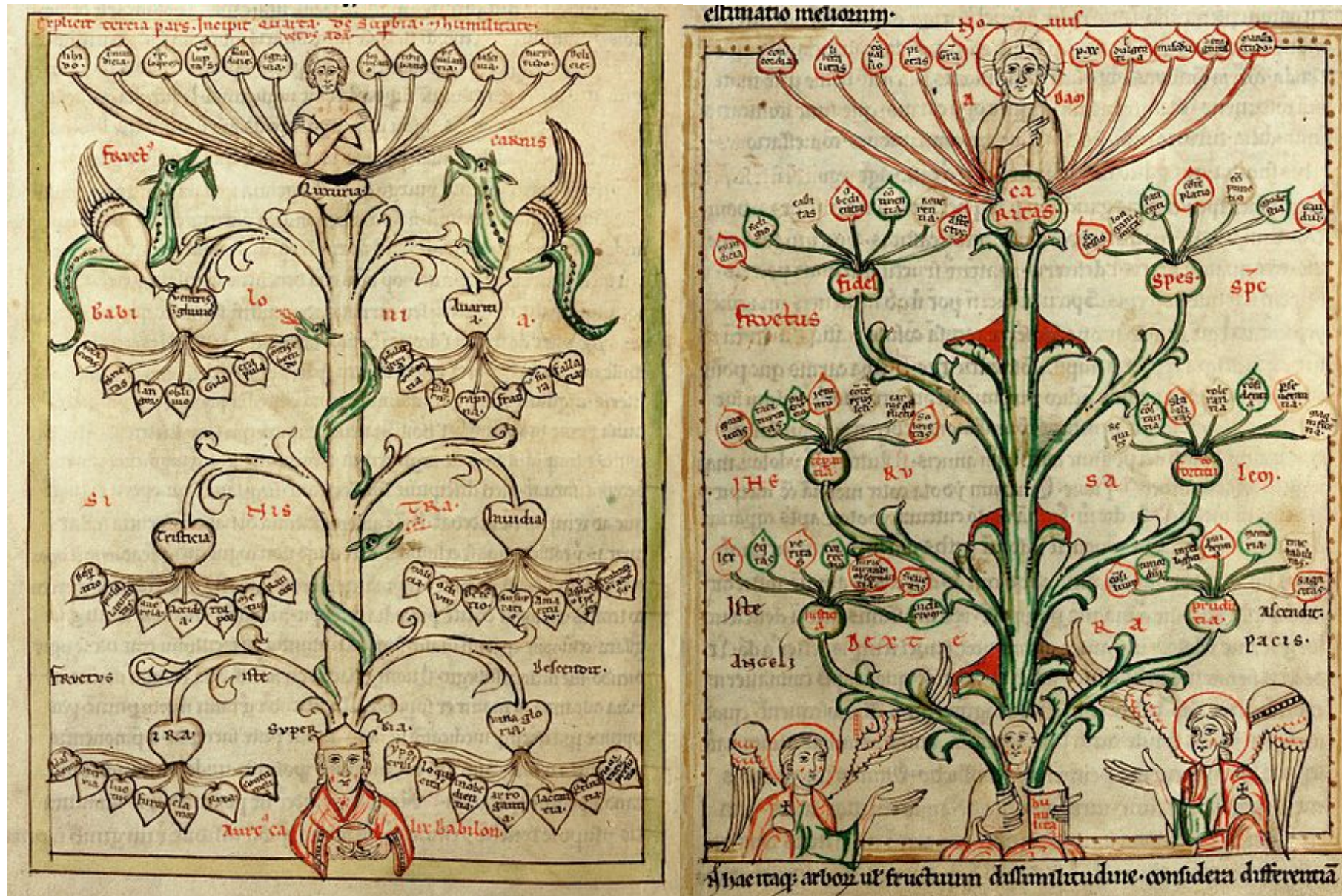


Source: mkivela.com/pynnet

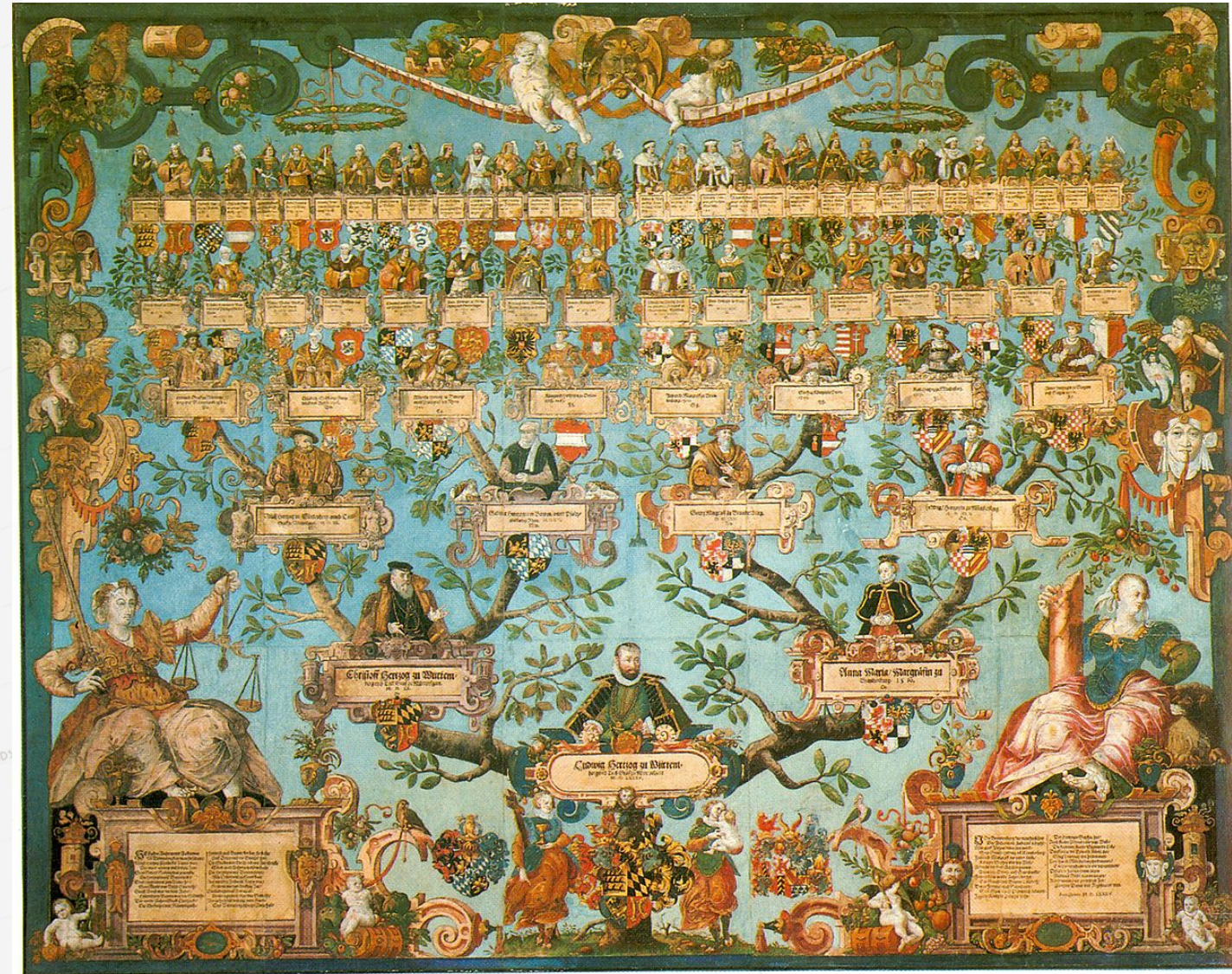
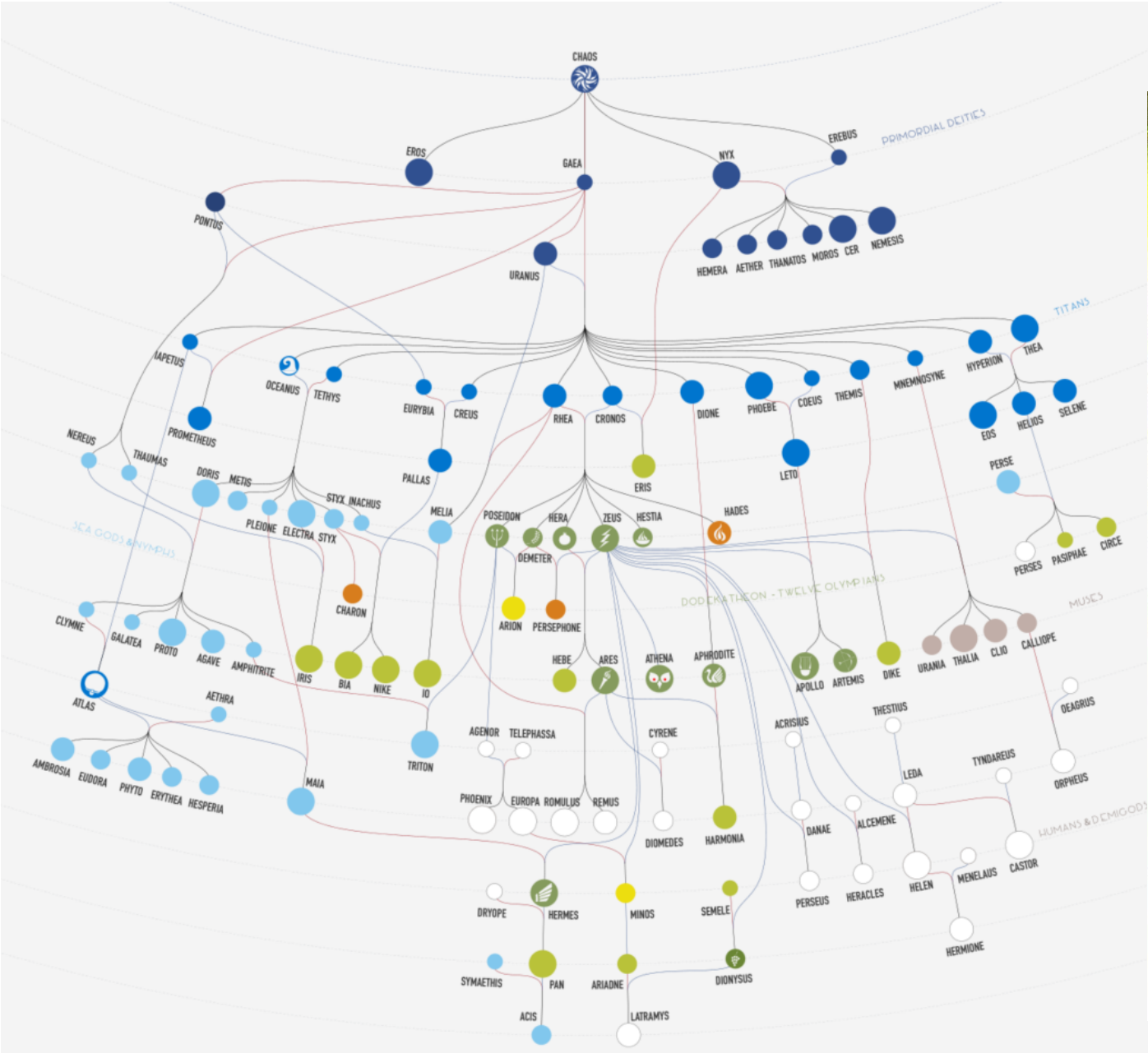
The slides of this presentation were created by researchers at Karlsruhe Institute of Technology (KIT), TU Wien, U Wuerzburg, U Konstanz, ...

Tree of virtues and tree of vices

ca. 1200



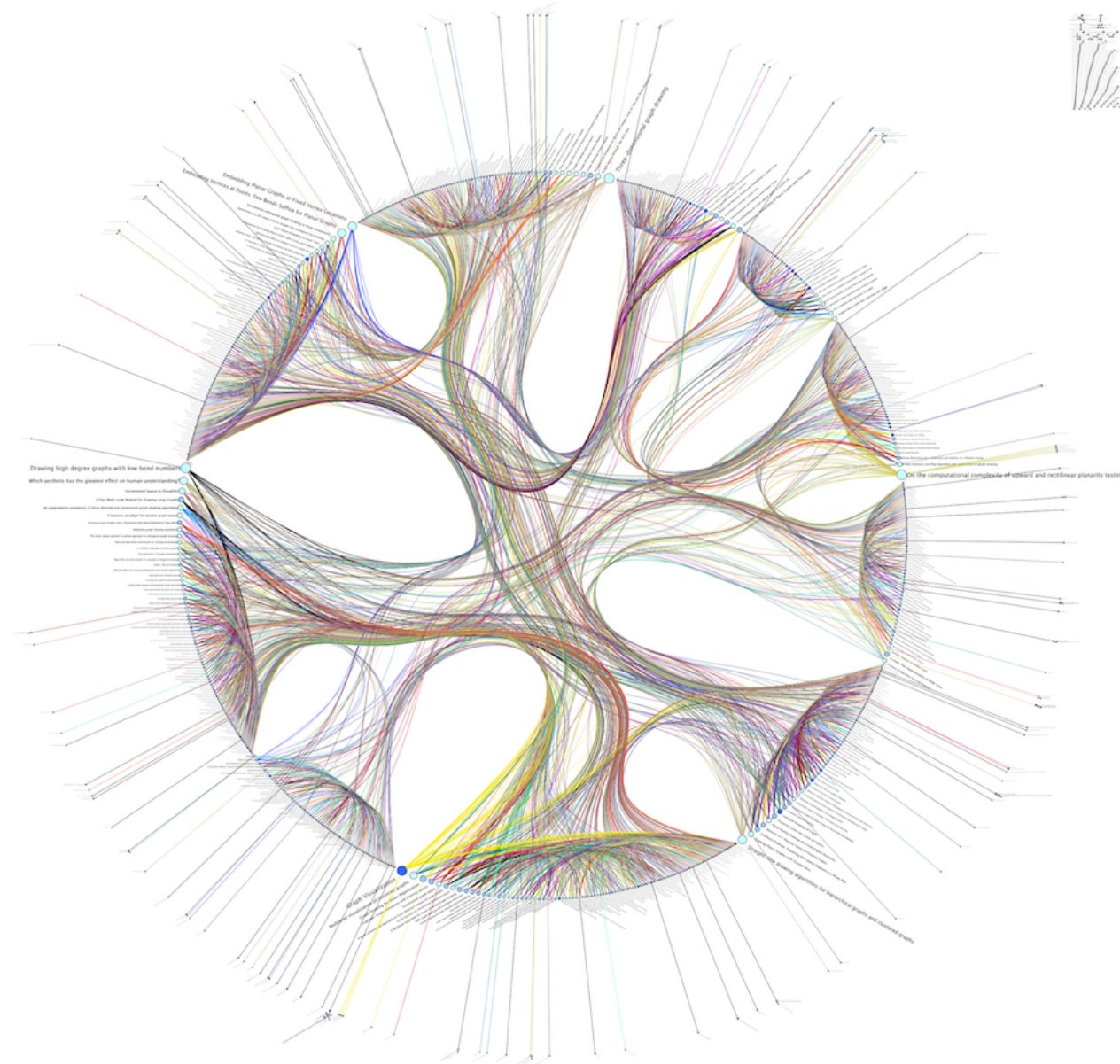
Social networks - family trees

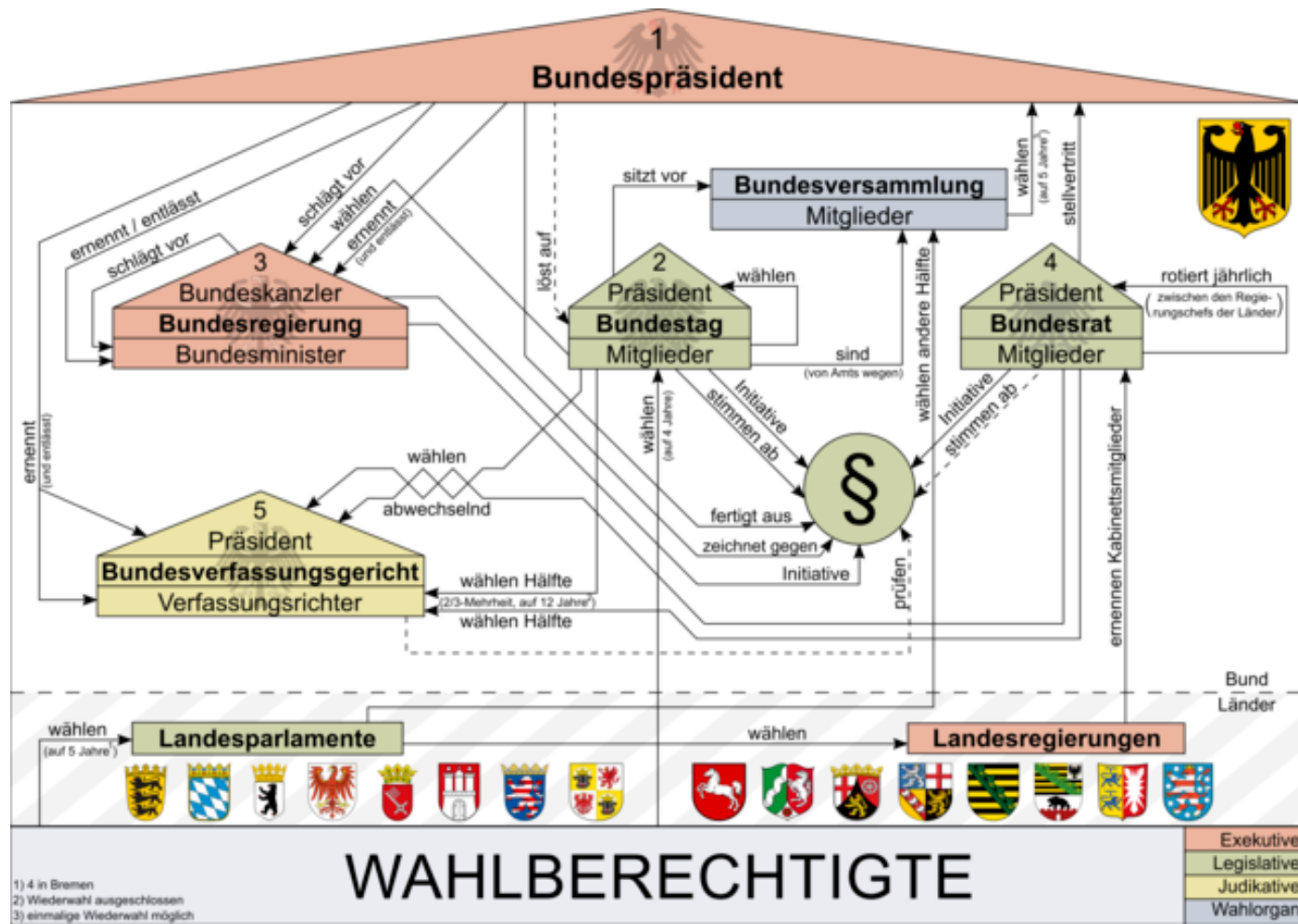


J. Klawitter, T. Mchedlidze, *Link*: go.uni-wue.de/myth-poster

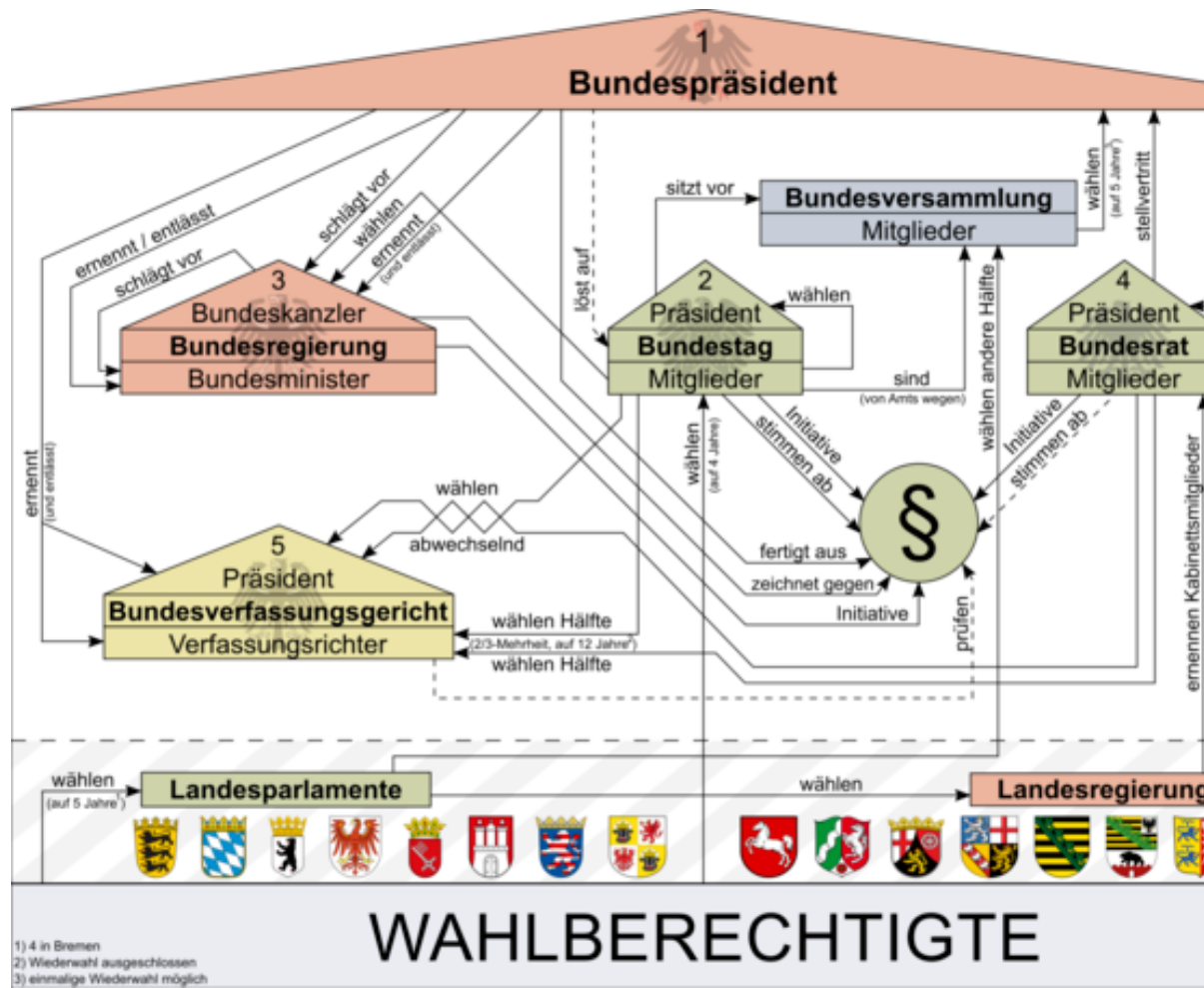
Ahnentafel Herzog Ludwig von Württemberg, 1585

Social network – citation graph

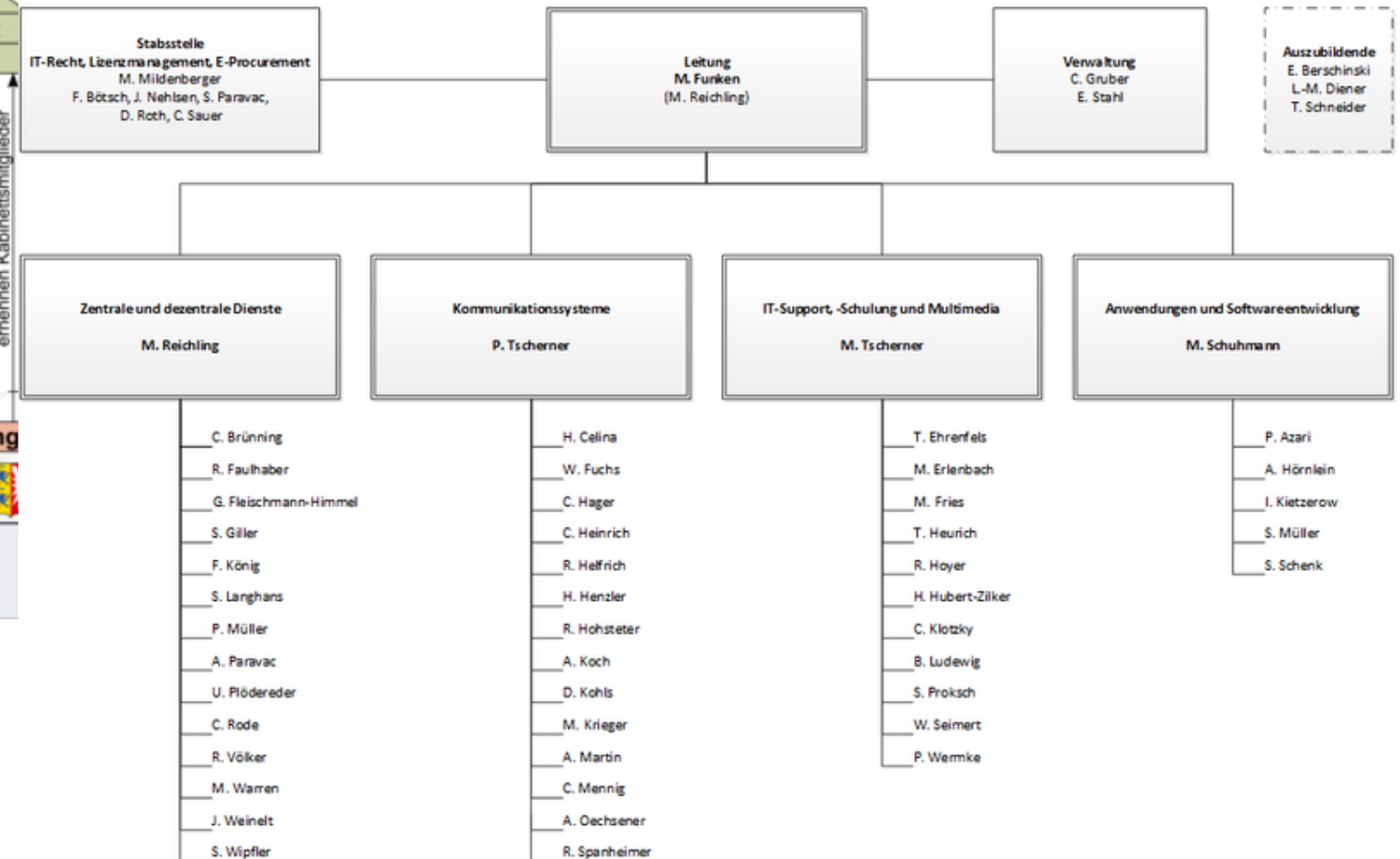




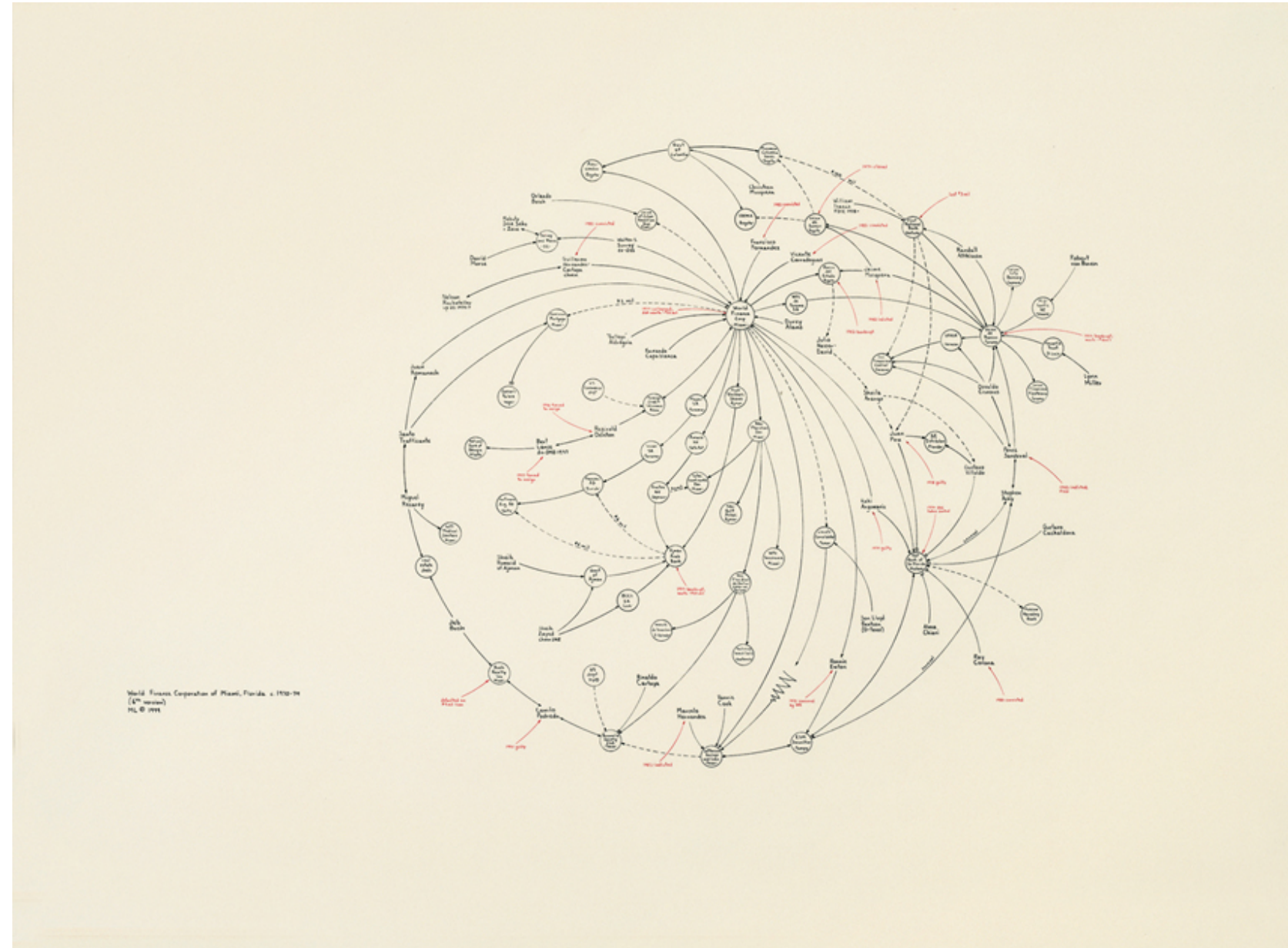
Social network - organisational chart



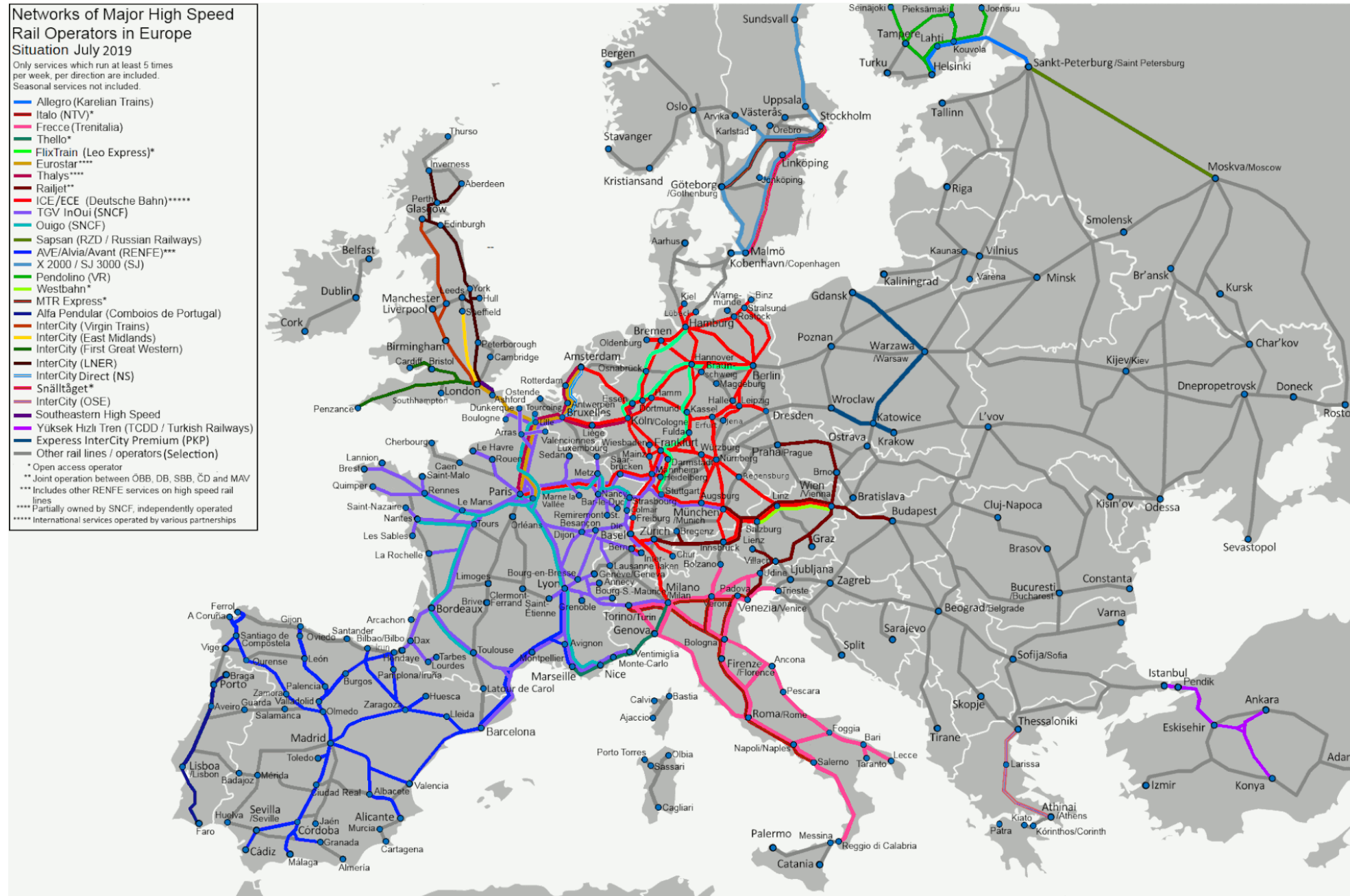
Organigramm des Rechenzentrums der Universität Würzburg
Ab 01.04.2018



Social network - world finance corporation



Transportation network – European high speed railroads



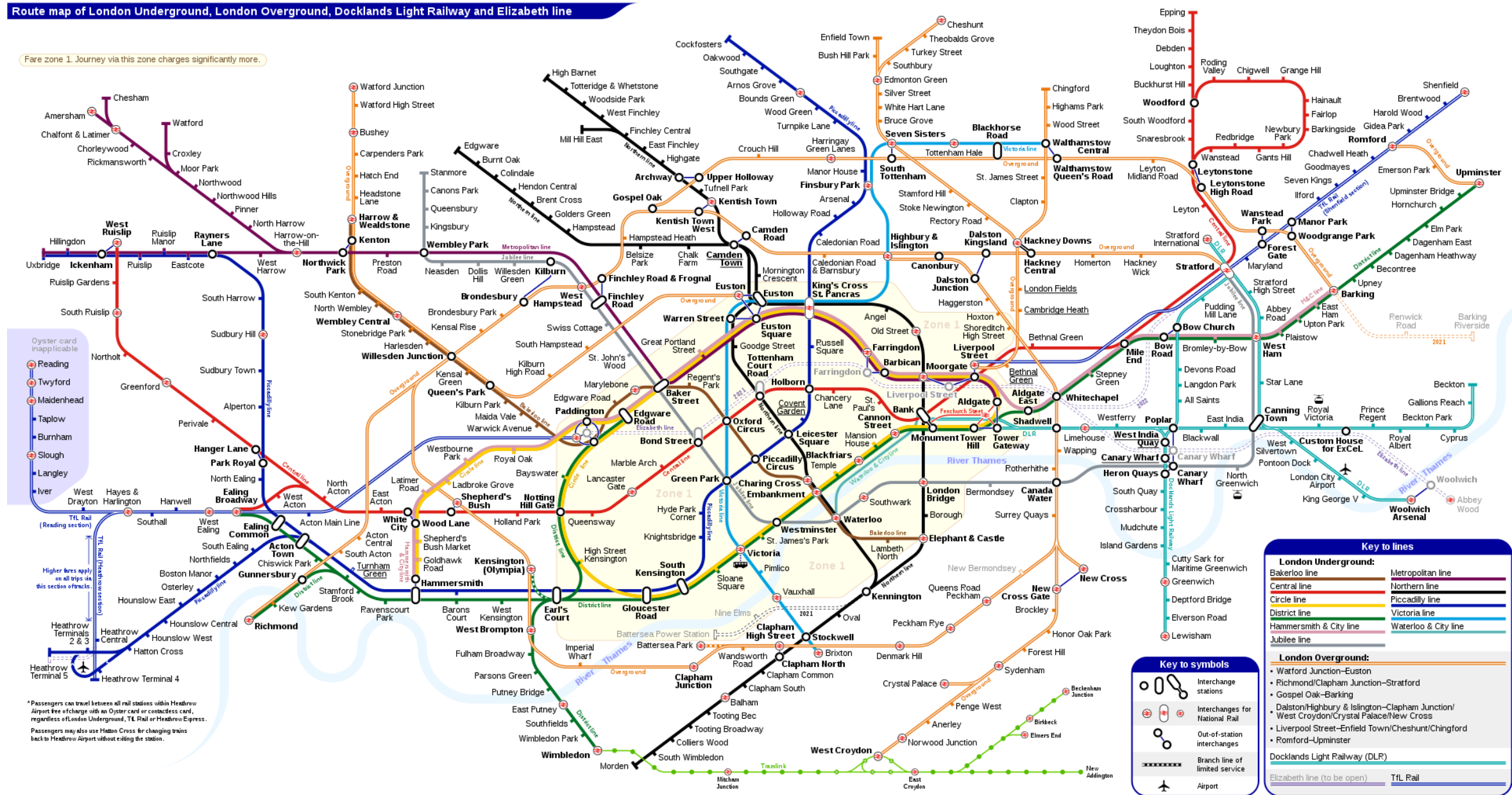
Source: Wiki Commons: Networks of Major High Speed Rail Operators in Europe - CC BY-SA 3.0

Transportation network - London Underground

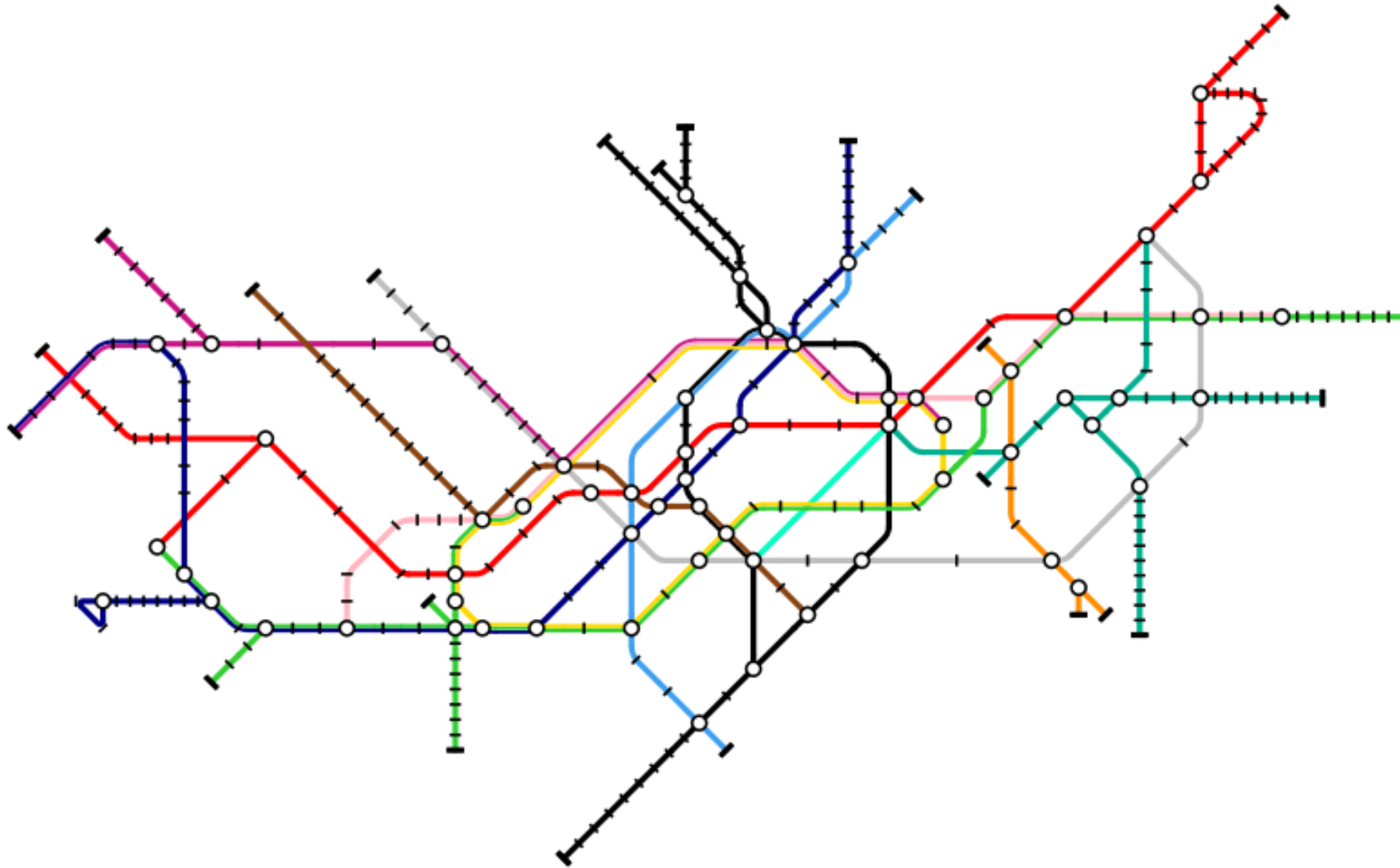


Source: Wiki Commons: London Underground full map - CC BY-SA 3.0

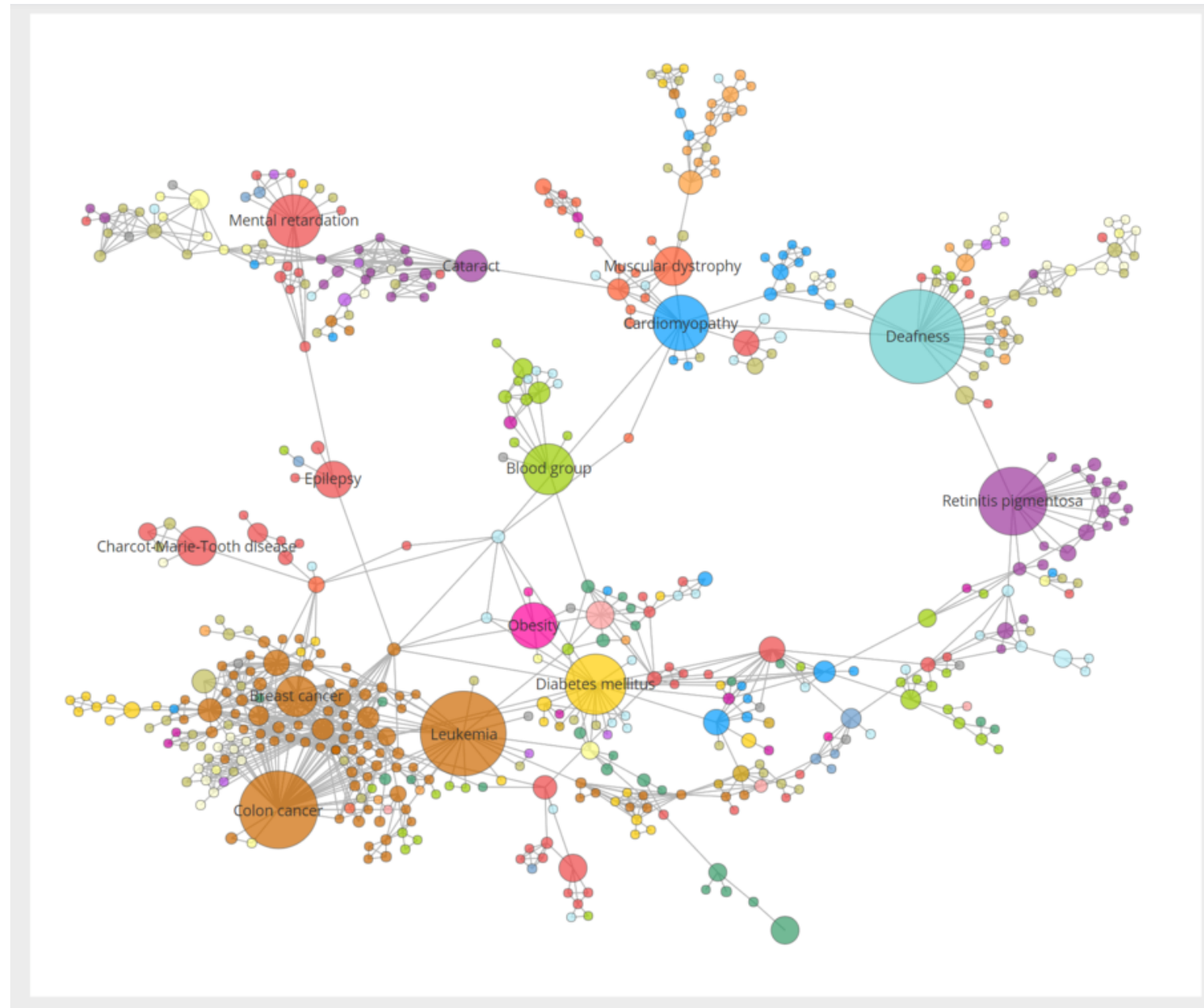
Transportation network - London Underground



Transportation network - London Underground

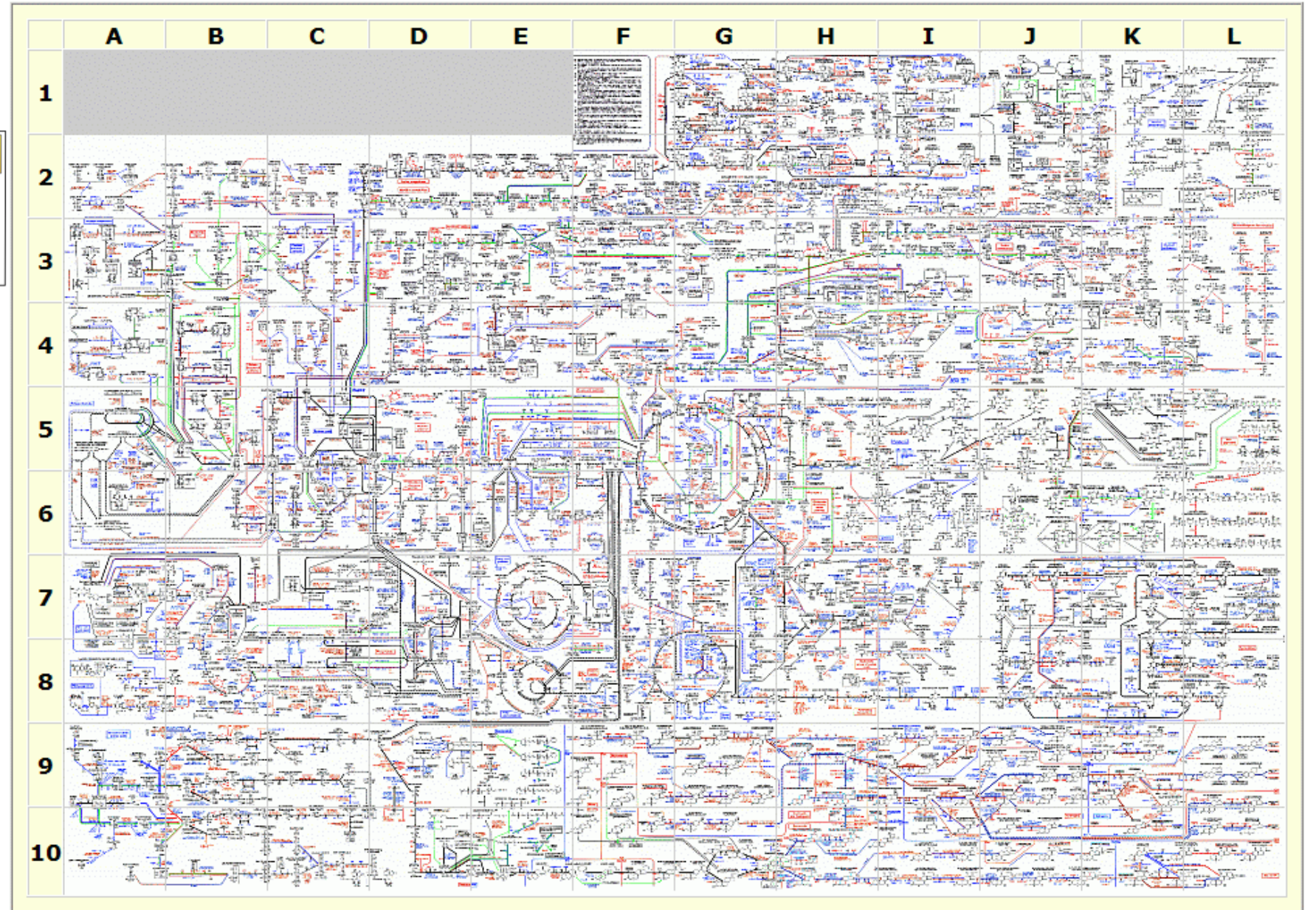
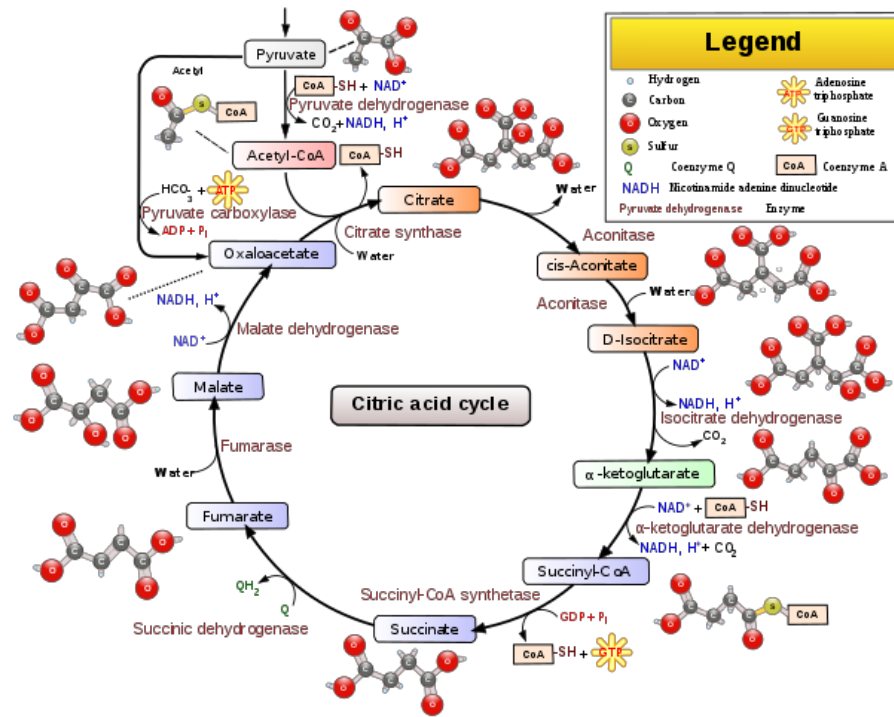


Bioinformatics – disease interaction

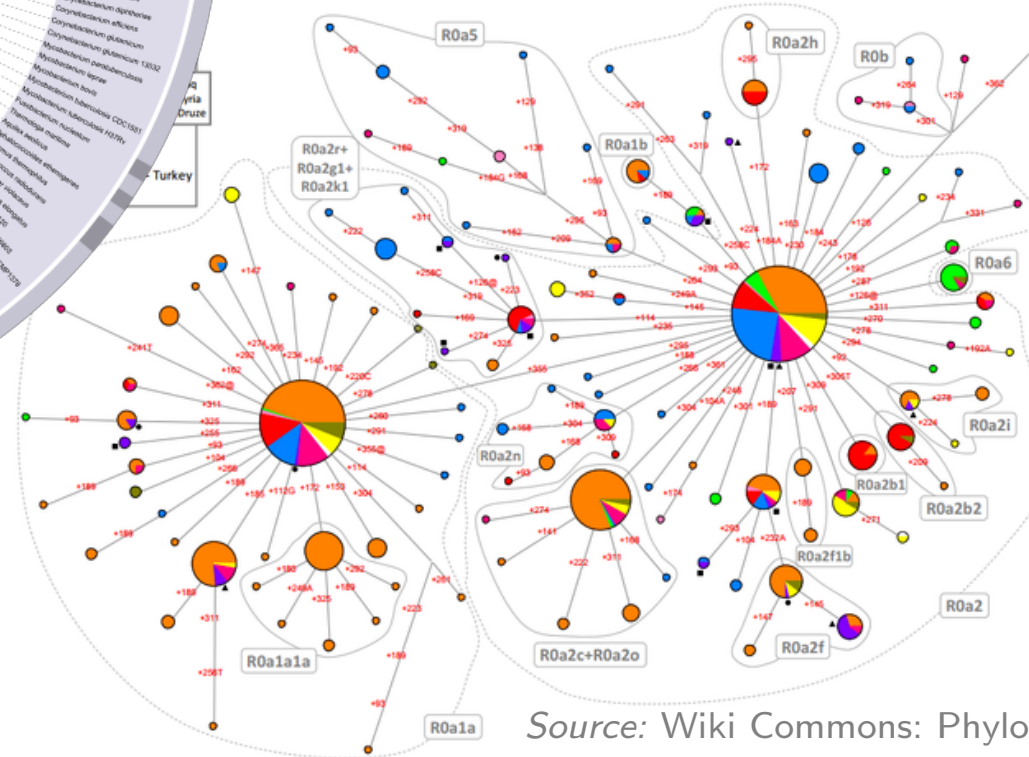
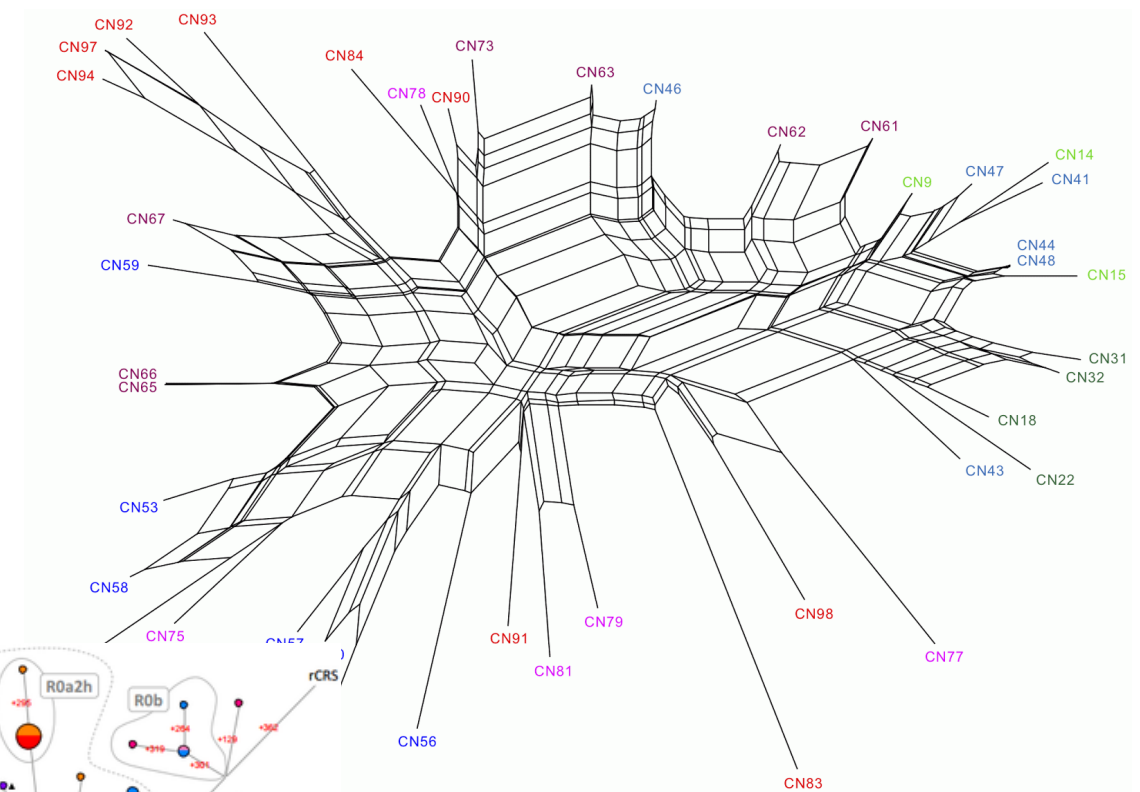
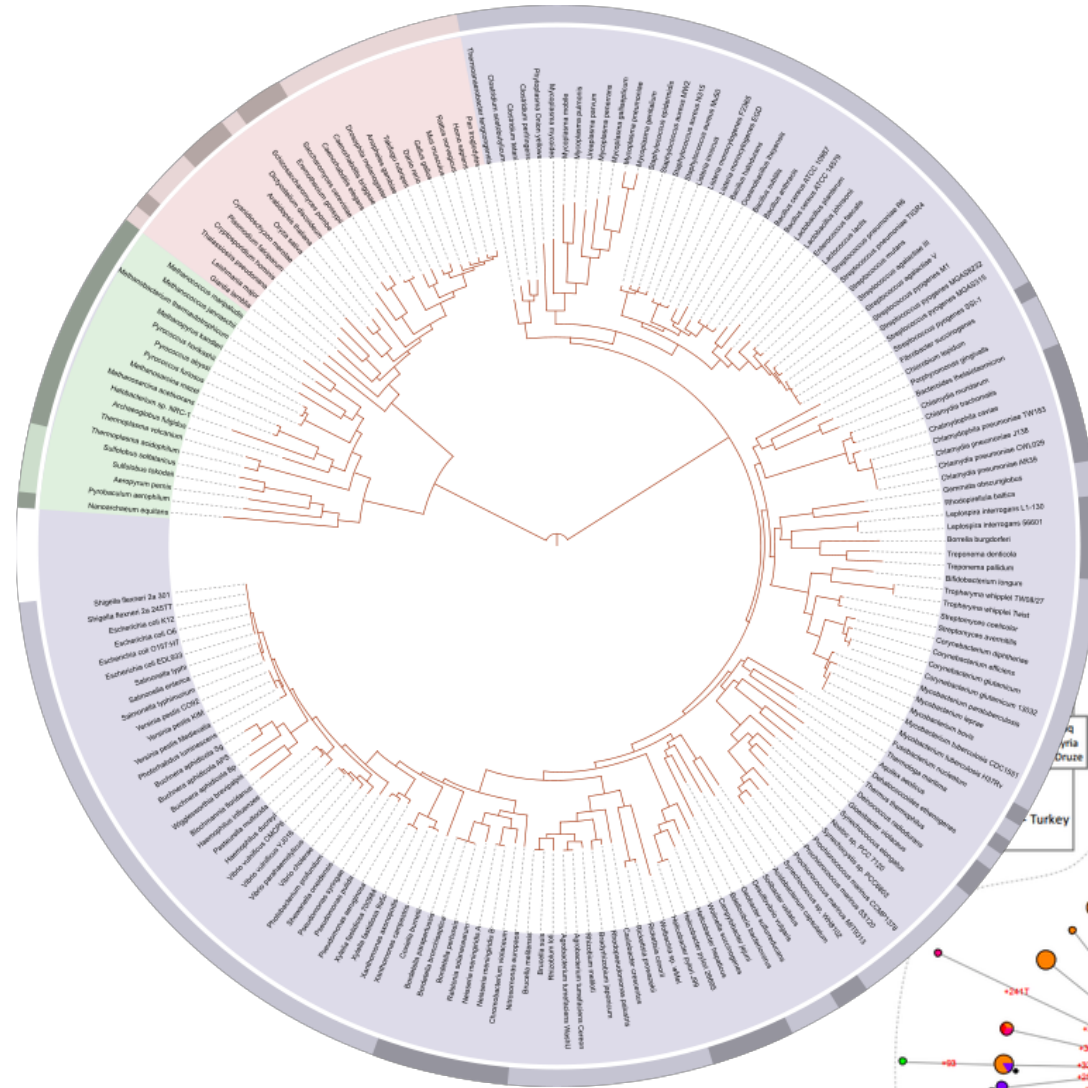


Source: Wiki Commons: Human disease network - CC BY-SA 4.0

Bioinformatics – molecular metabolic network

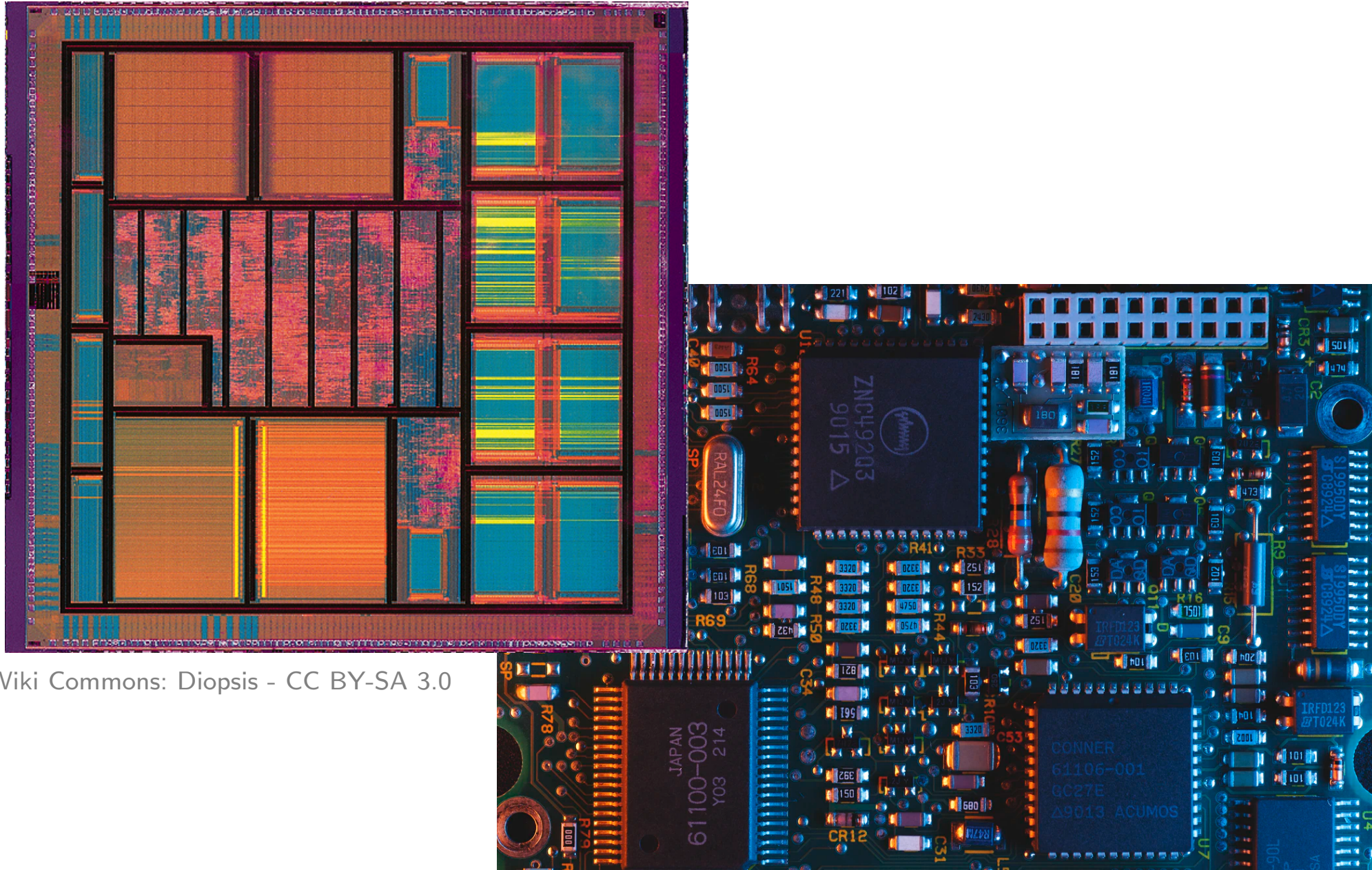


Bioinformatics - phylogenetic trees & networks

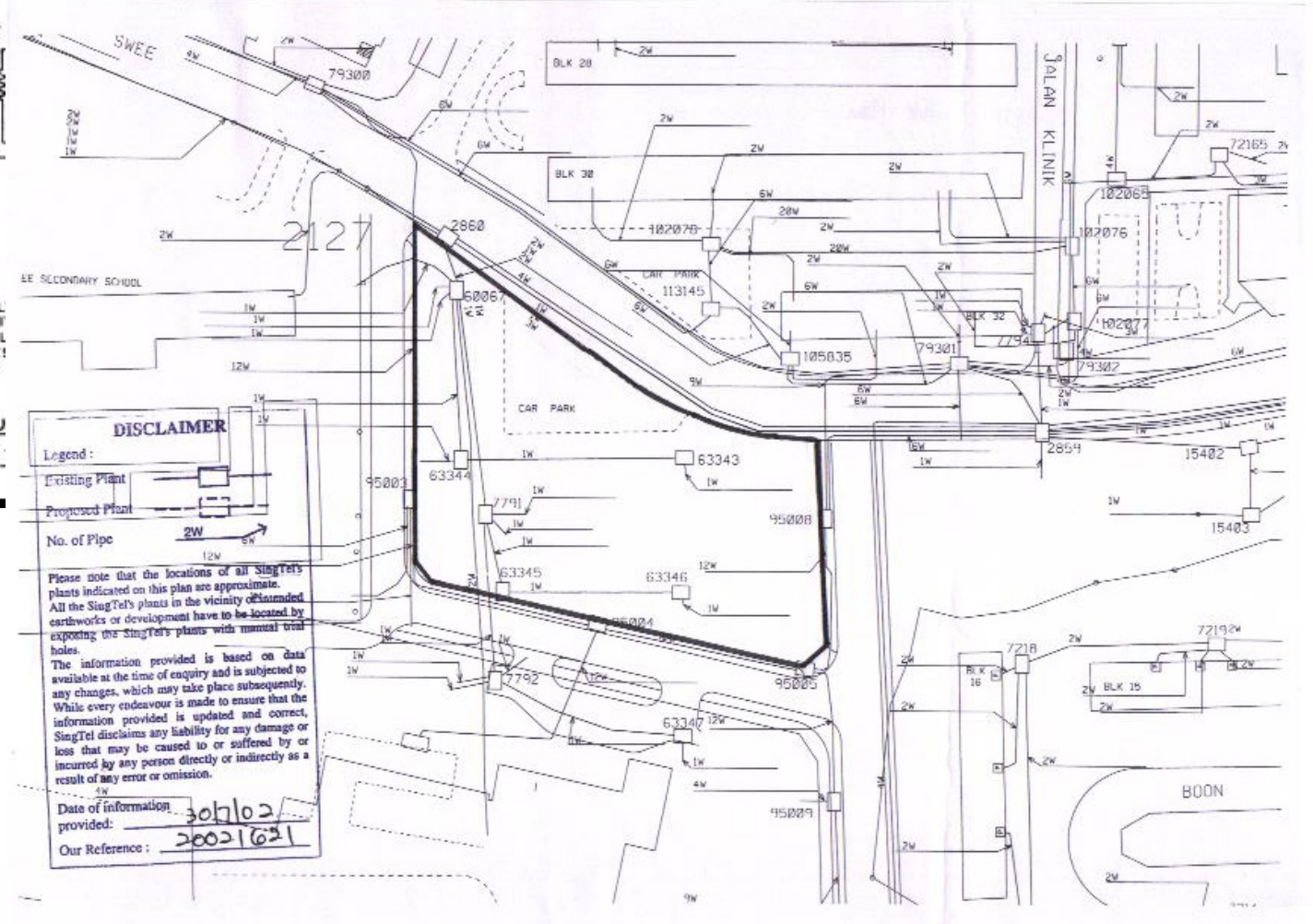


Source: Wiki Commons: Phylogenetic network of HVS-I variation - CC BY 4.0

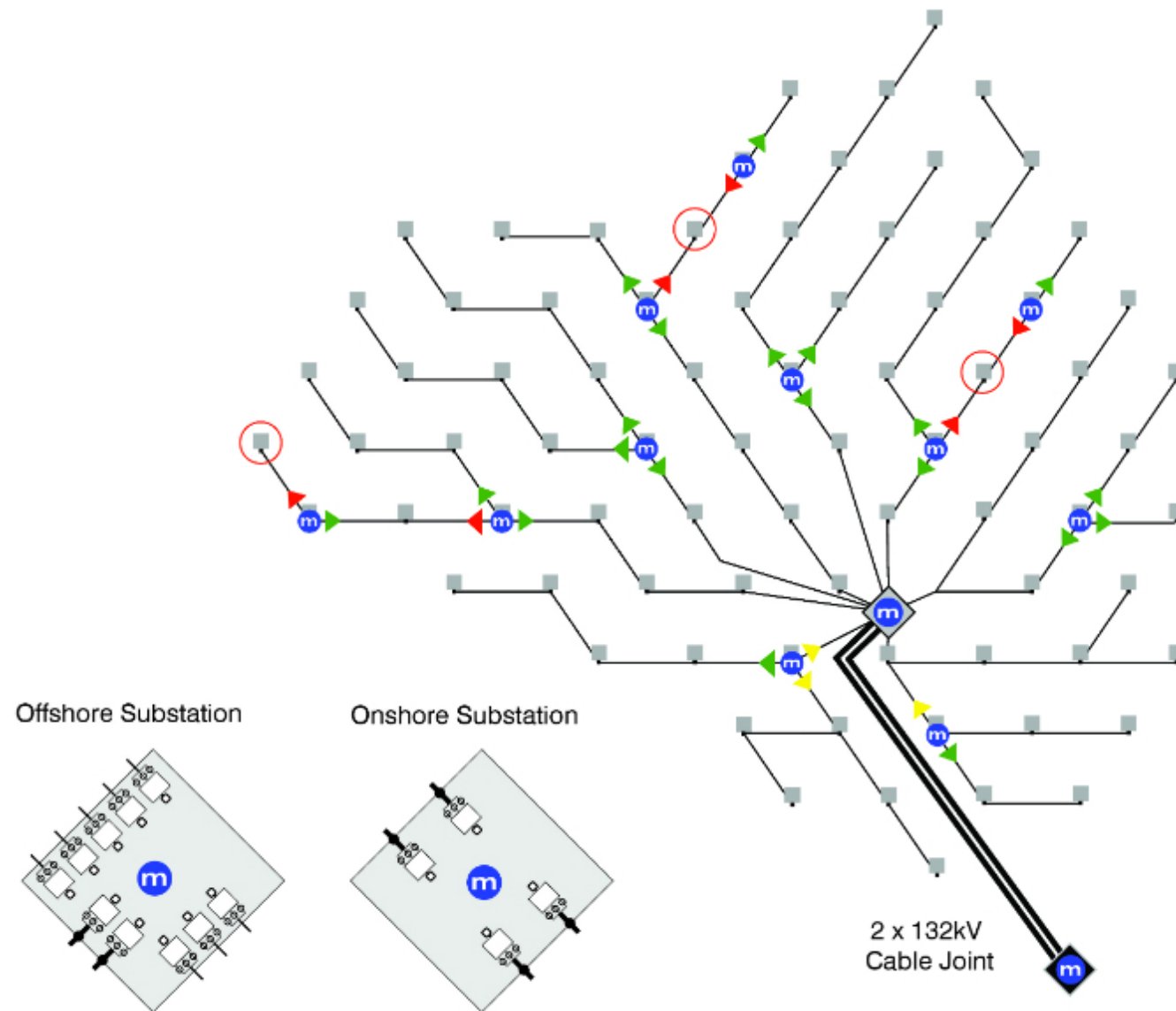
Technical network - very large-scale integration (VLSI)



Source: Wiki Commons: Diopsis - CC BY-SA 3.0

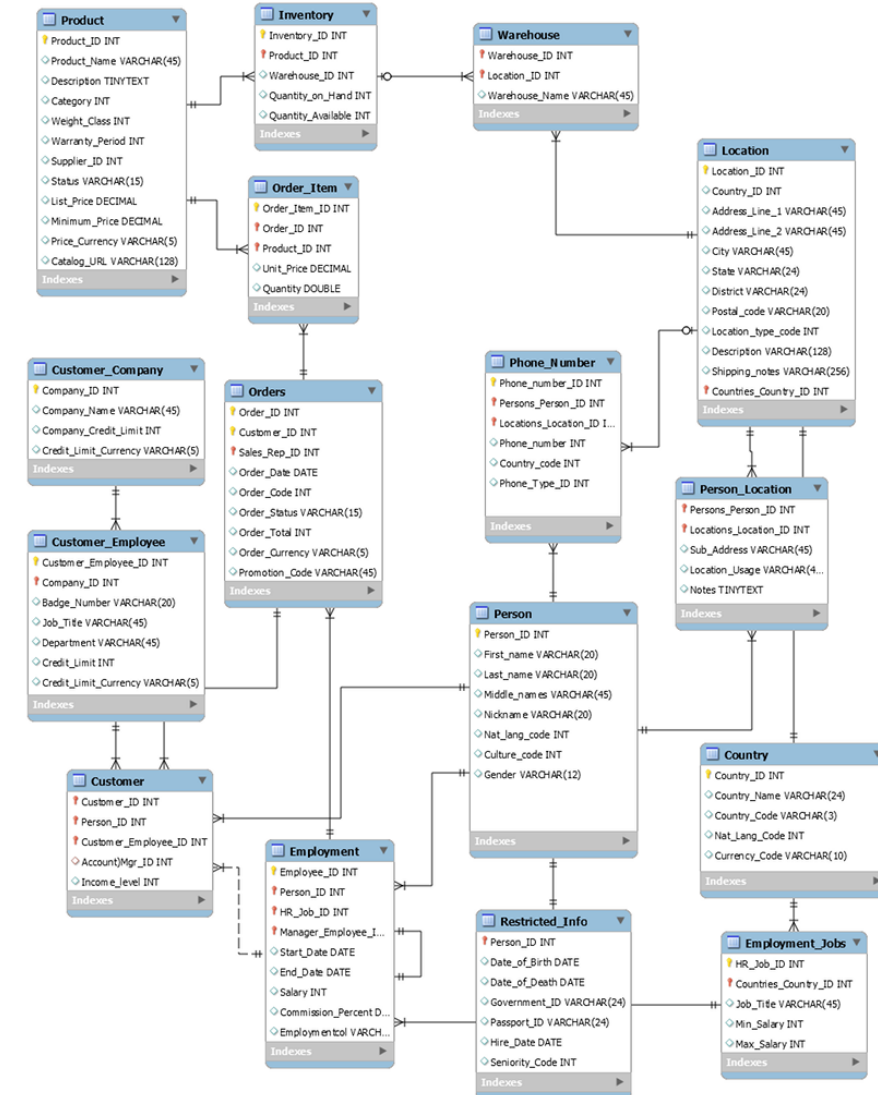
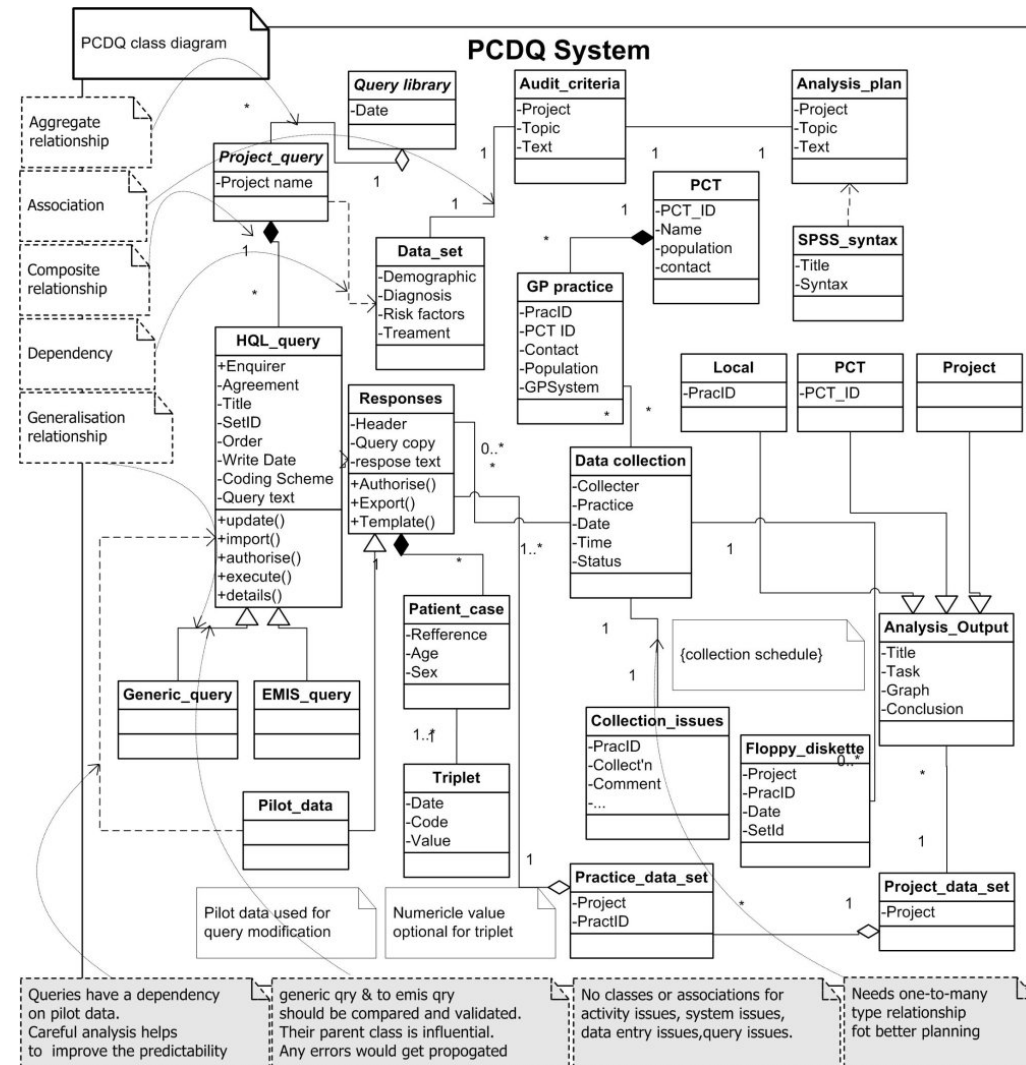


Technical networks – offshore wind farms



Source: Wiki Commons: Alpha Ventus Windmills - CC BY-SA 3.0

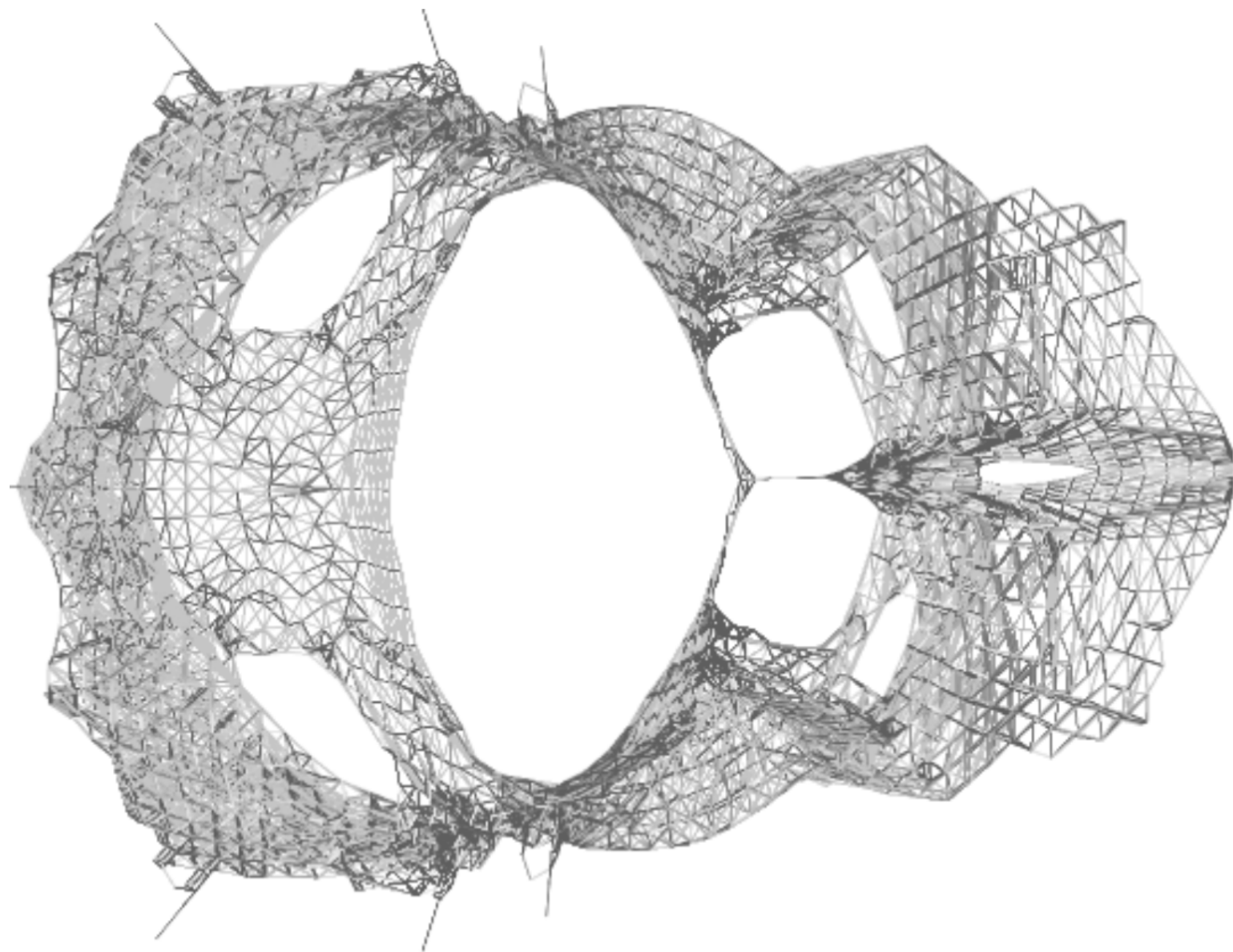
Technical network – UML diagram



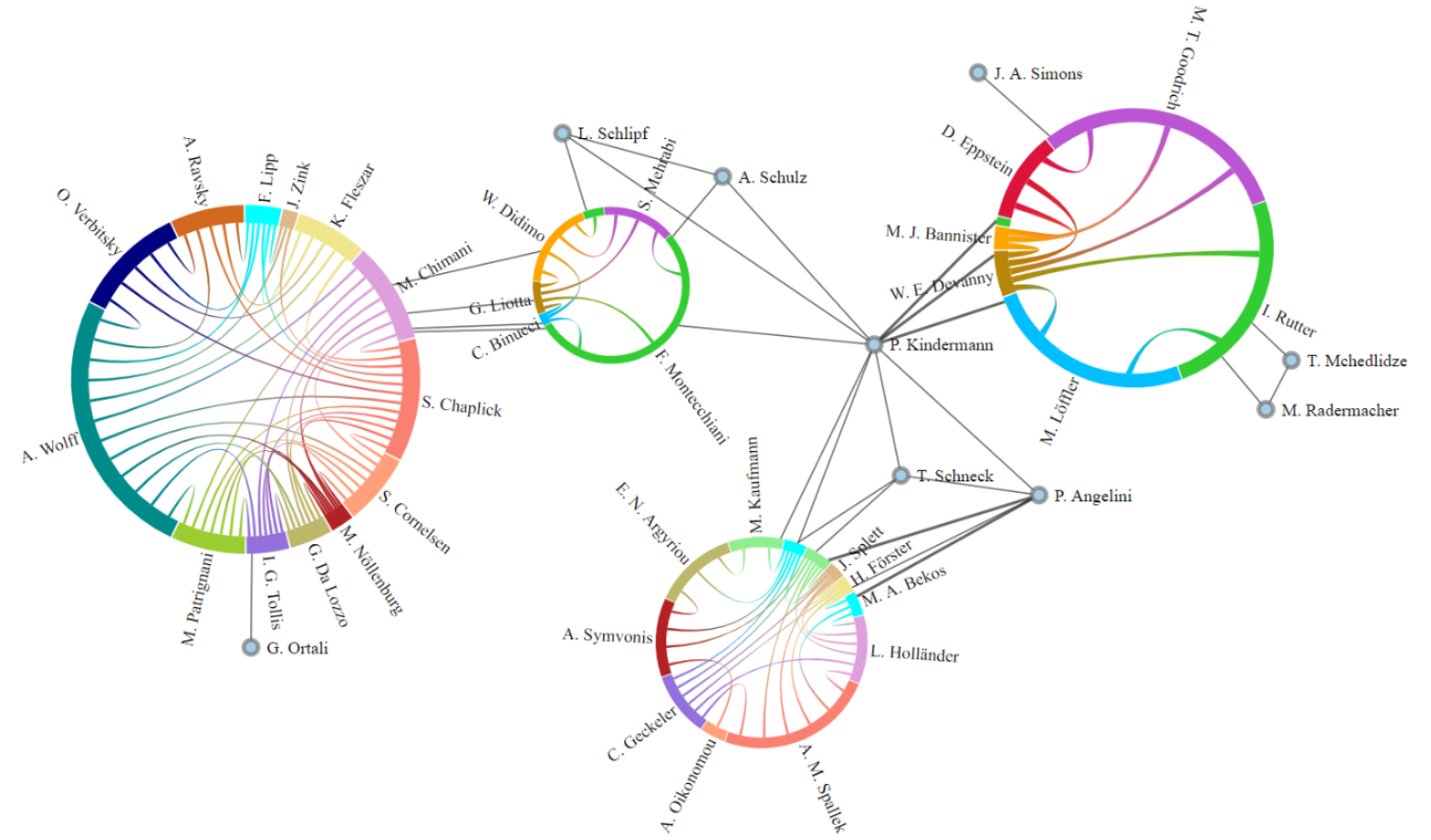
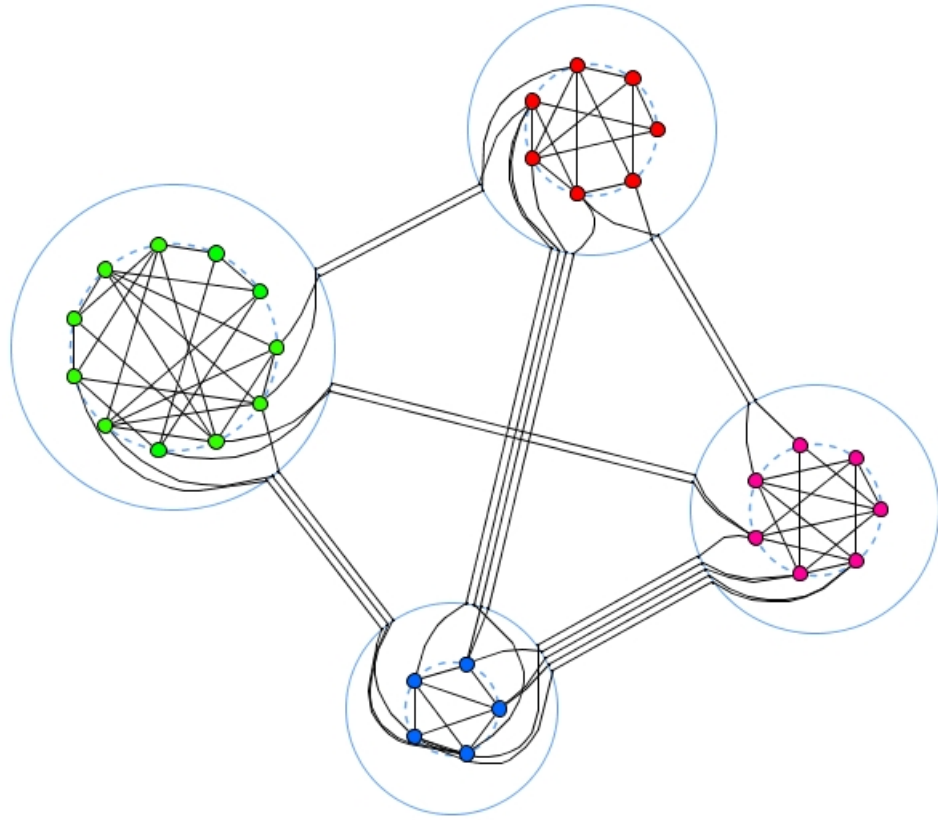
LORD OF THE RINGS



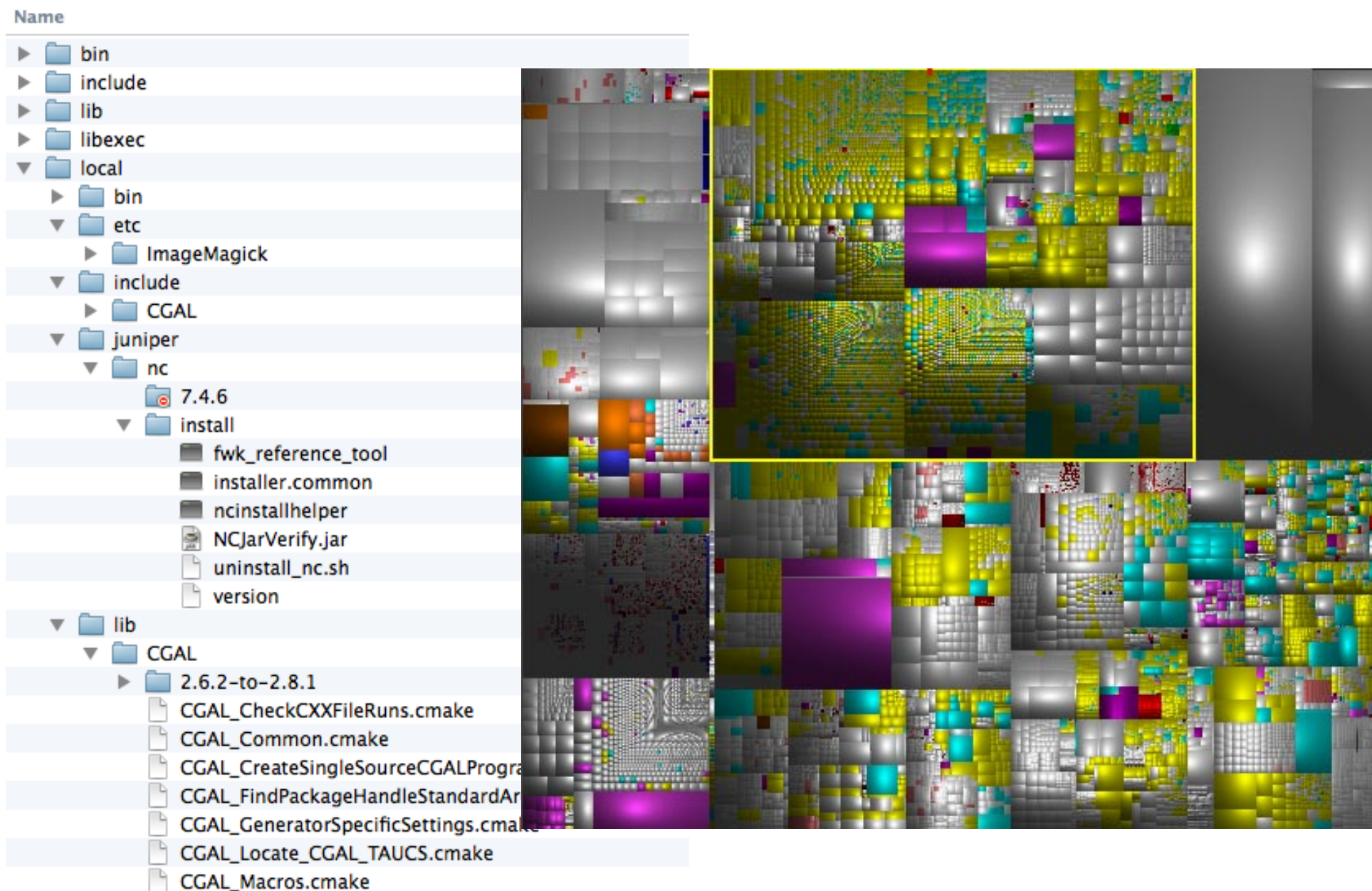
Large graphs – object mesh



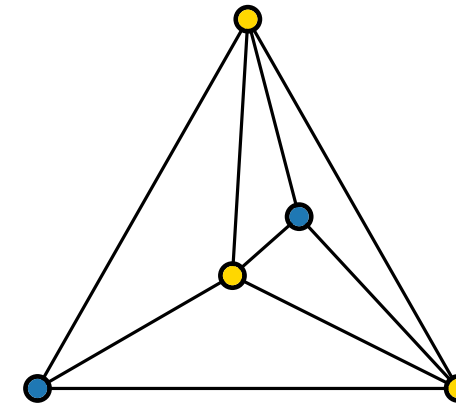
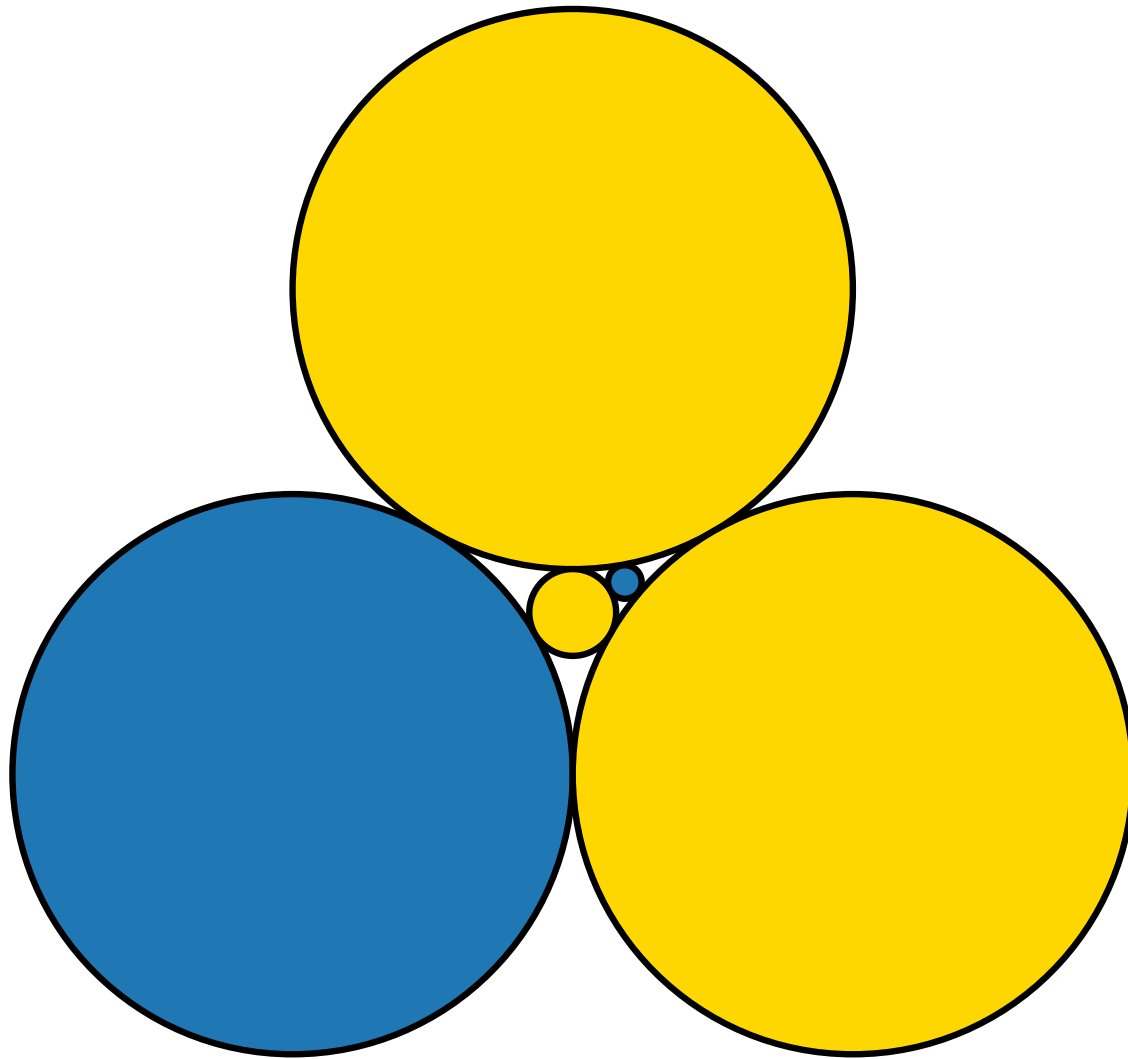
General graphs – micro-macro layout



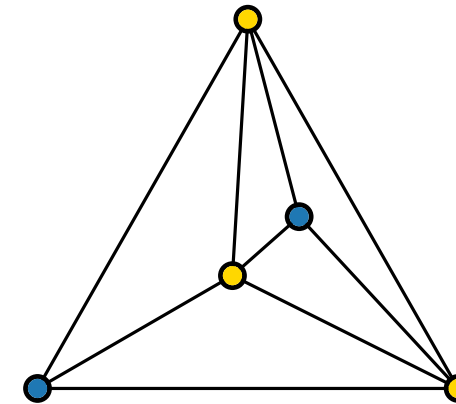
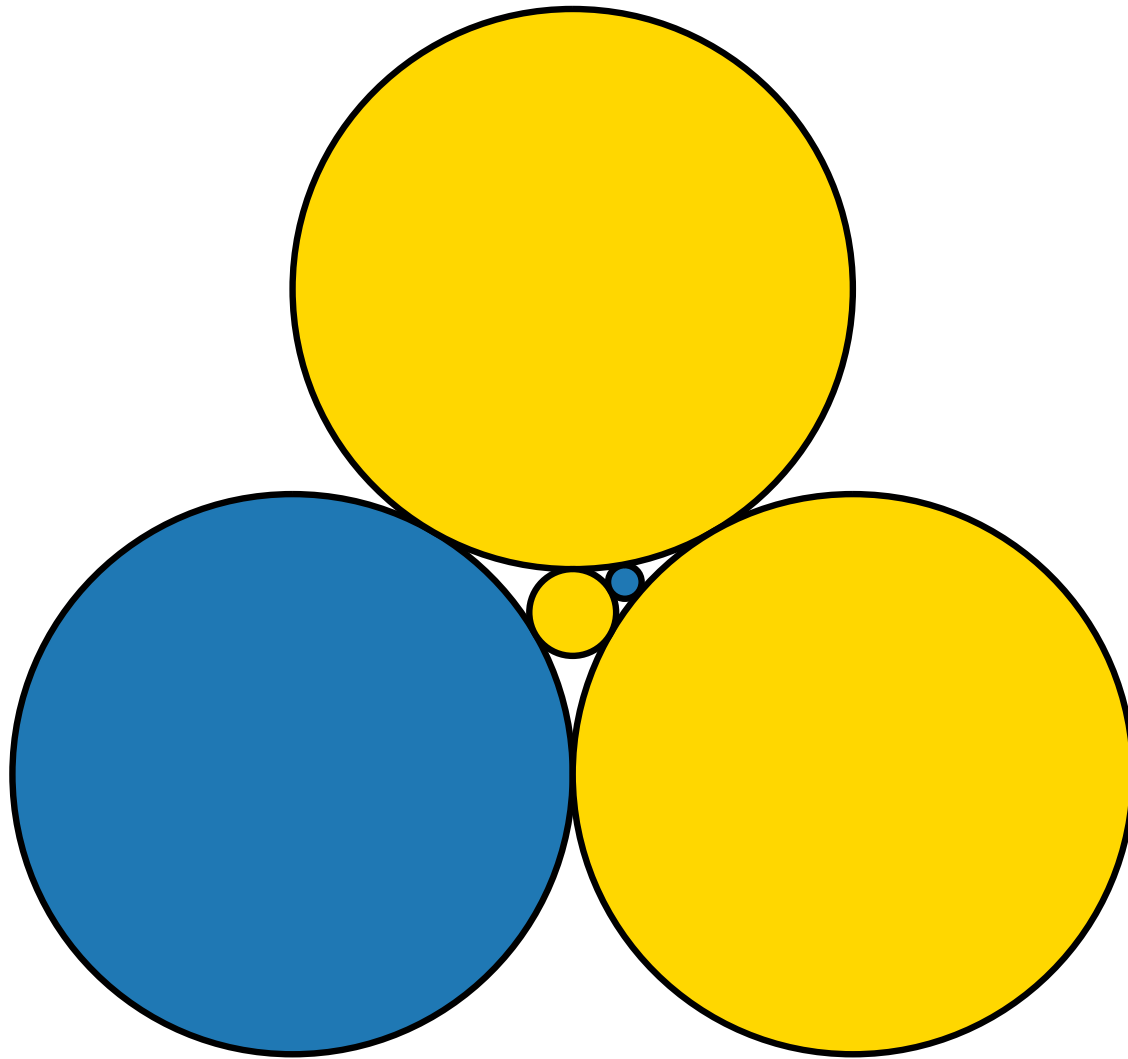
Alternative representations – treemap



Alternative representations – contact graphs



Alternative representations – contact graphs



■ For more examples see visualcomplexity.com