Firefly is noted for being one of the few canceled television series to be spun off into a major motion picture (Serenity). Pooling the filmography (plus television and videogame roles) of it regular cast (plus director/writer Joss Whedon, bottom right corner) from Wikipedia creates a bipartite graph of 446 nodes with the edges indexed by year of appearance (ranging from 1972 to present day).

Firefly brought a lot of people together (and led to future collaboration)

The graphs below are (manually adjusted; first graph was manually adjusted to avoid any edge overlap; second graph manually adjusted for better clustering and to prevent actors’ photos from covering nodes) Harel-Koren fast multiscale layouts of each actor’s filmography, with each edge representing a role in a film, television show or videogame. In the pre-Firefly graph, it can be seen that while both Adam Baldwin (Full Metal Jacket, Independence Day, The Patriot) and Ron Glass (Barney Miller) had relatively prolific acting careers before Firefly, there was almost no “collaboration” (defined as two actors appearing in the same work, although in the case of television, not necessarily the same episode) between the Firefly cast before Firefly started. The only cases are Joss Whedon and Summer Glau in Angel, Nathan Fillion and Adam Baldwin in The Outer Limits, and Adam Baldwin and Jewel Staite in The X-Files. Post-Firefly, there are so many cases of collaboration that it is difficult to even layout the graph without overlapping or excessive edge-crossing.
By filtering all of the nodes without collaboration, the graph is reduced from 436 to a very manageable 38 films/television series/videogames. *Firefly* and *Serenity* are also removed to reduce edge clutter. Adam Baldwin stands out as having done the most collaboration (18 roles) with his fellow *Firefly* cast and is the only one to have done some sort of collaboration with every single *Firefly* cast member (outside of *Firefly* and *Serenity* itself). Jewel Staite stands out as having done the least collaboration (only two roles with just two of the original cast members). The actors’ degree (number of collaborative roles) and collaboration level (number of original *Firefly* actors collaborated with) are as follows: Baldwin: 18, 9; Tudyk: 13, 7; Torres: 10, 7; Fillion: 9, 5; Glau: 7, 4; Baccarin: 6, 4; Whedon: 5, 7; Glass: 5, 4; Maher: 5, 3; Staite: 2, 2.
It’s hard to reunite more than two actors

Collaboration graph (excluding Firefly and Serenity and nodes with degree < 3)

Despite the high level of collaboration between Firefly cast members, it turns out to be quite difficult to reunite more than two of them in the same work. Filtering out all Firefly, Serenity and all other works with less than 3 Firefly cast members leaves only 9 multi-collaborative works and of these, only Angel features 4 ex-Fireflyers. Of these 9 multi-collaborative works, only Halo: ODST (a science fiction video game) features 3 of the actors each in a starring role. This makes ODST the closest thing available to a Firefly reunion.

Critique of NodeXL

NodeXL is excellent for what it is designed to do: allow non-programmers to visualize graphs. Since it is integrated into Excel, NodeXL gains many benefits (ease of use, familiarity with many users) and drawbacks (binary format, forcing a user to preprocess data with external tools instead of being able to process the spreadsheet itself, lack of cross-platform compatibility, a certain degree of instability generally associated with complicated Excel add-ons - it crashed 3 times during this assignment) of Excel itself.

There are a few missing features that could have helped the exploration process. The lack of a visual undo is maddening, especially when accidentally dragging a group of vertices to
the wrong location, as this has the potential to severely clutter the view. Also, for some reason, NodeXL lists a faulty “count” of vertices selected (in one case “15” when no vertices were selected and 5 \* the degree of each vertex when vertices were selected). Presumably, this is a bug. And while the dynamic filter were quite helpful, I found myself wishing for a ‘don’t filter’ option for vertices, so I could continuing display certain vertices regardless of the filter values. And finally, more sophisticated layout options would be helpful. More than once, I found myself wishing for the ability to selected a sub-region of the display area, and layout a group of selected vertices \textit{restricted} to that sub-region.

However, despite these limitations, the tool was still very usable. Overall, the interface was intuitive (after getting past the initial learning curve) and powerful enough to explore a moderately sized graph.