**Motivation**
The motivation for this visualization was to be able to get an idea of a newsgroups’ activity and possibly compare it to others. Some newsgroups only get spam, this means that these newsgroups have no conversations, but a user might join the newsgroup not know this. Other newsgroups simply do not have conversations, they have questions and people answer them. There are other newsgroups that only have a few users who actually post on a newsgroup. Before entering a newsgroup, a user might want to get an idea of what the newsgroup is like, what the community is like, are there a lot of posters, few posters, are there lots of conversations or no conversations at all, etc. Users have the opportunity to learn how a newsgroup functions before joining the group. That is why I wanted to make a visualization that reflected this activity.

**Description**
In this visualization, users can compare different newsgroups. There are a number of simple statistics one can gather from newsgroups, in the image, we show three. One can look at the number of posters, the number of posts, or the number of threads with more than 4 responses. Other statistics could involve the number of members at a given time, the number of individual posts during a time span, and more.

The bottom represents the timeline. In the image the timeline is a year. However, a column can be selected to see a month view of the newsgroups’ activity. From that view, one can click the shapes to see an ordered view of that statistic. For example, clicking on an Xbox circle would bring up a list of the
posts for that day. Clicking on a purple hexagon would bring up a list of the threads from that day with more than four responses, in order of most responses to least.

From this visualization, users can get an idea of which newsgroups get more posts in general, if they are interested in amount of activity. Users can how many different posters there are. They can tell large communities from small ones. They can also gauge the amount of discussion going on with how many longer threads there are.

Users can also compare one newsgroup to another. One newsgroup might have a lot of posters, but very few discussions. One thread might peak if something noteworthy is happening, but then die down after the excitement is gone. With this in mind a user can learn about a newsgroup that he/she may be interested in joining. That user can go into the newsgroup already knowing about the dynamics of how this particular community functions.

**Update**

In this updated version, a few things have changed. First of all, transparency was added to the shapes to allow for one to be able to get a better idea of what was behind it. The largest shape is at a 90% opacity level, the middle shape is at 80% opacity, and the smallest shape is at 70% opacity. This allows two shapes of the exact same size to appear on top of each other, and the user can still see that there is the other shape behind the one in front because of the way the colors blend together (as allowed by the transparency). The transparency also allows users to see and distinguish overlaps between neighboring shapes. If there are two months with a large number of posts (or discussions or individual posters) the shapes of those two months are might overlap on the sides a bit. The transparency makes it so the shapes can be distinguished from each other at those points.

I also added a gauge for users to get a better idea on how some shapes compared to other shapes. Each set of data has its own graph area. So there are individual graphs defined by the boxes with slightly lighter backgrounds than the overall background of the visualization as a whole.

I started to change all the shapes to circles but then noticed that even with the separate graph areas it was getting harder to tell data points from one graph apart from the data points of another graph. So I then looked at other shapes. I didn’t want to use shapes that were not nicely symmetrical, like a triangle because where ever a user might think the triangle is “pointing” might make them confused. The shapes chosen also seem to have a nice aesthetic because of their symmetry. I didn’t want to use a shape with too many sides in case it started to look like a circle. Legends were also added to the graph labels, so users could easily figure out which shape belonged to which graph.

Finally, timelines were added to the top and bottom of the graphs to allow users to easily pick out the time period the data pertains to.