In 2008, a team of researchers at MIT set up an experiment to observe what they called “Social Evolution”. Using smart phone apps and digital sensors, they tracked the lives of an entire dormitory full of college students, over the course of a year. Where they went, who they called and texted, who their friends were and how often they socialized – all this was recorded hundreds of times each day. The goal was to be able to watch how social networks emerge and evolve in real time. The result was a massive dataset, consisting of moment-by-moment records of a year in the lives of 84 individuals, as they met, socialized, and formed groups and relationships. Our project was to bring this social network to life, by creating a set of interactive tools to visualize and navigate the MIT Social Evolution data.

Using d3, an interactive online visualization library, we created a simple interface to work with the network data. Users can choose from one of three different visualization options to represent the entire network – a classic force-directed layout, a chord graph, or a heatmap cluster. Each node is an individual subject from the Social Evolution experiment, and the graph edges represent the amount of interaction any two people in the network have at a given point in time.

The app loads the data from Day One of the experiment, but users can adjust the Time Slider to move forward and backwards in time. Click the Animation button to watch connections emerge and grow across the course of the study.

More detailed information about individuals or specific connections is displayed in the Network Details box. You can see how two people match up on a number of dimensions, including personality, tastes, and politics. There’s also a Friend Meter that identifies how one person feels about another. Most of the time, there’s a pretty clear relationship between two people’s degree of connectedness with one another and how close they feel toward each other. But sometimes it gets a little awkward.

Pairwise relationships can also be viewed in the aggregate, either by opening the Heatmap tab in the main viewing window, or by selecting a specific heatmap to accompany one of the graph views. Each heatmap shows how frequently groups of individuals interact with one another – how often, for instance, liberals hang out with other liberals, versus with conservatives. As a simple example, you can see here how members of the same school year tend to hang out with each other much more than they do with other years.

If you want to look more closely at a specific subset of the network population, you can use the Filters tab to remove groups based on their characteristics.