Table of contents

Data Structures and Variables for NetSense

There are three types of data:

- Event data: indicating when a communication event occurred and between whom (and other information)
- Dyadic data: For a give time period, frequencies of interaction between two nodes. Created by collapsing event data over a time period and over node pairs.
- Node data: For a given time period, counts of people i communicated with (degree), along with activity levels

For the dyadic and node data the notation references nodes i and j, and time period t.

$e_{ijt} = 1$. An **edge** exists if in time period t (e.g., week 1) i initiated a communication event with j.

If $e_{ijt} = e_{jit} = 1$, the tie is mutual in that week.

We defined a **new tie,** e*ijt = 1 as one where eijt= 1 and ejit' = 1 where t' t. That is one edge has occurred in that week or a prior week, and now the other edge occurs in week t.

We define an active tie in a given week, aijt = 1, if e*ijt' = 1 for t' t and eijt = 1 or ejit= 1