Appendix 2 Glossary

The following definitions are taken from:

unless otherwise noted.

- **Weakly Connected**
  - A directed graph is said to be *weakly connected* if its underlying undirected graph is *connected*.
- **Connected**
  - An undirected graph is said to be *connected* if there exists a walk between every pair of its vertices.
- **Mutually Reachable**
  - “Let $u$ and $v$ be vertices in a digraph $G$. Then $u$ and $v$ are said to be *mutually reachable* in $G$ if $G$ contains both a directed $u \to v$ walk and a directed $v \to u$ walk. Every vertex is regarded as reachable from itself (by the trivial walk).”
- **Strongly Connected**
  - A digraph is *strongly connected* if every two vertices are *mutually reachable*.
- **Strong Component**
  - “A *strong component* of a digraph $G$ is a maximal strongly connected subgraph of $G$. Equivalently, a *strong component* is a subdigraph induced on a maximal set of *mutually reachable* vertices.
- **Component**
  - “The subgraphs of $G$ which are maximal with respect to the property of being *connected* are called the components of $G$.”
- **Graph Density**
  - “The density of a graph is the ratio of the number of edges and the number of possible edges.” (from igraph library documentation).