Structural System Property: \textit{atis} Vulnerableness

(Structural system properties are those properties that are part of the theory and describe patterns of system and negasystem connectedness. The structural properties define the topology of the system, and every affect relation defines a topology on the system.)

\textbf{Vulnerableness}, $\mathcal{V}S$, = \textit{df} a partition, $\mathcal{Y} = (\mathcal{V} \subset \mathcal{G}_0, \mathcal{R} \subset \mathcal{G}_A)$, characterized by bridge-affect-relations.

\[ S = \text{df} \mathcal{Y} | \forall u, v \in \mathcal{Y}(\mathcal{V}) \exists e \in \mathcal{Y}(\mathcal{R})[e = (u, v) \Supset \ell(e) = \ell_{\text{Bridge}}(e) = 1] \]

\textbf{$\mathcal{M}$: Vulnerableness measure}, $\mathcal{V}S$, = \textit{df} a measure of bridge-affect-relations.

\[ \mathcal{M}(\mathcal{V}S) = \text{df} \left\{ \left[ \sum_{i=1}^{n} \left( \sum_{j=1}^{m} \ell_{\text{Bridge}}(e)_{ij} \right) \right] \div C \right\} \times 100 \]
Affect Relation: Controls Activities of
In this system, there are there are 2 components that Control Activities of other components with respect to Vulnerableness. Since there is only 1 affect-relation and 14 components, then the total possible affect relation paths is $P[Z(S_0)] = 236,975,181,590$; and therefore, $C = \log_2(P[Z(S_0)]) \approx 37$. There are 2 paths related to Vulnerableness.
Therefore: $M(\gamma S) \approx 5.29.$