

Graph-Theoretic Property: *atis* Completely Connected Components Set

(*Graph-theoretic properties* are those properties that are part of the meta-theory and have been abducted from graph theory to be used as a tool to provide solutions concerning the theory. Those solutions may be assigned as values to components or relations of the theory and thereby become part of the theory.)

Completely-connected components set, ${}_{cc}E$, =_{df} a set of system components that are pair-wise path-connected in both directions.

$${}_{cc}E =_{df} \mathcal{X} = \{x \mid x \in \mathcal{R} \subset \mathcal{S}_0 \wedge \exists y \in \mathcal{R} [x \neq y \wedge (x,y) \in {}_{cc}E]\}$$

Completely-connected components set is a set of components, x ; such that, the components, x , are in a subset of the object-set, and there exist distinct components, y , of the subset such that (x,y) are completely connected.

The following diagram depicts a *Completely-Connected Components Set*.

