Set-Theoretic Property: *atis*SystemRelationSet

(*Set-theoretic properties* are those properties that are part of the meta-theory and have been abducted from set 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.)

System relation-set, S_{ϕ} , =_{df} A non-empty set of ordered pairs of components from the object-set.

 $\mathfrak{S}_{\phi} =_{\mathrm{df}} \{ (\mathbf{x}, \mathbf{y}) \mid \exists \mathbf{x}, \mathbf{y} (\mathbf{x} \in \mathfrak{S}_{\mathsf{Dx}} \land \mathbf{y} \in \mathfrak{S}_{\mathsf{Dy}}) \};$

where (\mathfrak{S}_{0x}) and (\mathfrak{S}_{0y}) identify the specific *object-sets* of \mathfrak{A} that contain x and y, respectively. \mathfrak{S}_{0x} and \mathfrak{S}_{0y} are not necessarily disjoint.

System relation-set is defined as a set of ordered components that are in two subsets of the system object-sets.

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