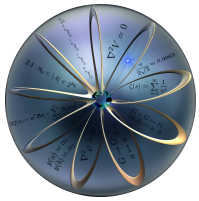

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hyperconnected space

Canonical name	HyperconnectedSpace
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Synonym	hyper-connected space
Related topic	UltraconnectedSpace
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Defines	hyperconnected
Defines	hyper-connected

A topological space X is said to be *hyperconnected* if no pair of nonempty open sets of X is disjoint (or, equivalently, if X is not the union of two proper closed sets). Hyperconnected spaces are sometimes known as `http://planetmath.org/Irreducibl` sets.

All hyperconnected spaces are connected, locally connected, and pseudocompact.

Any infinite set with the cofinite topology is an example of a hyperconnected space. Similarly, any uncountable set with the cocountable topology is hyperconnected. Affine spaces and projectives spaces over an infinite field, when endowed with the Zariski topology, are also hyperconnected.