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Dirk Hofmann* (dirk@ua.pt). *Dualities for distributive spaces.*

Our work with topological spaces presented as convergence structures shaped the idea that *topological spaces are generalised orders*, and eventually revealed the following analogies.

For an ordered set X :	For a topological space X :
down-closed subset	filter of opens
non-empty down-closed subset	proper filter of opens
directed down-closed subset	prime filter of opens
upper bound	limit point
supremum	smallest limit point
cocomplete ordered set	continuous lattice
directed cocomplete ordered set	stably compact space
completely distributive lattice	???
continuous directed cocomplete ordered set	???

In this talk we try to remove the the two question marks above. Furthermore, we show that the category of distributive spaces is dually equivalent to a category of frames by simply observing that both sides represent the idempotent splitting completion of the same category. (Received January 21, 2011)