thin square

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Let us consider first the concept of a *tree* that enters in the definition of a thin square. Thus, a simplified notion of thin square is that of "a continuous map from the unit square of the real plane into a Hausdorff space X_H which factors through a tree" ([**?**]).

Definition 0.1. A *tree*, is defined here as the underlying space $|K|$ of a finite 1-connected 1-dimensional simplicial complex K and boundary ∂I^2 of $I^2 = I \times I$ (that is, a *square* (interval) defined here as the Cartesian product of the unit interval $I := [0,1]$ of real numbers).

Definition 0.2. A *square map* $u : I^2 \longrightarrow X$ in a topological space X is *thin* if there is a factorisation of u,

$$u : I^2 \xrightarrow{\Phi_u} J_u \xrightarrow{p_u} X,$$

where J_u is a *tree* and Φ_u is `http://planetmath.org/GeometricallyAndorAlgebraicallyThinSquares`piece linear (PWL) on the boundary ∂I^2 of I^2.

References

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