Definition: A po-space is a topological space, X, with a partial order $\leq$, s.t.
$\{(x,y) \mid x \leq y\}$ is closed in $X \times X$

Definition A local po-space is a topological space, X, which is Hausdorff. Together with an open covering $\mathcal{U} = \{(U_i, \leq_{U_i}), i \in J\}$ of po-spaces s.t.

For all $x \in X$ there is a nonempty open po-neighborhood $(W_x, \leq_{W_x})$ s.t

$$x, y, z \in U_i \cap W_x \Rightarrow \left(y \leq_{U_i} z \Leftrightarrow y \leq_{W_x} z\right)$$

Two local partial orders $\mathcal{U}, \mathcal{V}$ are equivalent if their union is a local partial order

Definition A map $f: X \to Y$ of local po-spaces is a dimap if

f is continuous

- $\forall x \in X \; \exists W_x, W_{f(x)}$ po-neighborhoods s.t.
$z, w \in f^{-1}(W_{f(x)} \cap W_x), z \leq_{W_x} w \Rightarrow f(z) \leq_{W_{f(x)}} f(w)$