Definition (Monoidal product in **DP**)
Given two design problems $\mathbf{d} : \mathbf{P} \nrightarrow \mathbf{Q}$ and $\mathbf{e} : \mathbf{R} \nrightarrow \mathbf{S}$, their *monoidal product* $\mathbf{d} \otimes \mathbf{e} : \mathbf{P} \times \mathbf{R} \nrightarrow \mathbf{Q} \times \mathbf{S}$ is their conjunction:

$$\mathbf{d} \otimes \mathbf{e} : (\mathbf{P} \times \mathbf{R})^{\mathrm{op}} \times (\mathbf{Q} \times \mathbf{S}) \to_{\mathbf{Pos}} \mathbf{Bool},$$
$$\langle \langle p, r \rangle^*, \langle q, s \rangle \rangle \mapsto \mathbf{d}(p^*, q) \wedge \mathbf{e}(r^*, s).$$

The diagrammatic representation of the monoidal product is reported in **??**.