**Lemma.** For any $A, B \in \mathrm{Ob}_{\mathbf{DP}}$, the design problem $\mathrm{br}_{A,B} : A \times B \nrightarrow B \times A$ given by

$$\mathrm{br}_{A,B}(\langle a_1, b_1 \rangle^*, \langle b_2, a_2 \rangle) := (a_1 \leq_{\mathbf{A}} a_2) \wedge (b_1 \leq_B b_2)$$

constitutes the braiding operation for a symmetric monoidal structure on $\langle \mathbf{DP}, \otimes, \{\bullet\} \rangle$. In other words, $\langle \mathbf{DP}, \otimes, \{\bullet\}, \mathrm{br} \rangle$ is a symmetric monoidal category.