

CHASE-inverse schema mappings

- Schema mapping $\mathcal{M} : \Leftrightarrow$ triple (S_1, S_2, Σ) with
 - S_1, S_2 : Source and target schema
 - Σ : Set of dependencies (as s-t tgds)
- Inverse schema mapping $\mathcal{M}^* = (S_2, S_1, \Sigma^*)$ for $\mathcal{M} : \Leftrightarrow \mathcal{M} \circ \mathcal{M}^* = \text{id}$
- Sufficient and necessary conditions for the existence of CHASE-inverse schema mappings:

CHASE-inverse	Sufficient condition	Necessary condition
Exact	-	$I^* = I$
Classical	Exact CHASE-inverse	$I^* \equiv I$
Tp-relaxed	Exact CHASE-inverse	$I^* \preceq I, I^* = I $
Relaxed	Tp-relaxed CHASE-inverse	$I^* \preceq I$
Result equivalent	Relaxed CHASE-inverse	$I^* \leftrightarrow_{\mathcal{M}} I$