

not-R-occurs-effect-compat^{11,40}

$$\begin{aligned} \forall i, x: \text{Id}, T: \text{Type}, ds: \text{fpf}(\text{Id}; x. \text{Type}), f: & ((\text{decl-state}(ds) \rightarrow T \rightarrow \text{decl-type}\{i:l\} \\ & (ds; x \\ &)) + (\text{decl-state}(ds) \\ & \rightarrow T \rightarrow \text{rationals} \rightarrow \text{decl-type}\{i:l\} \\ & (ds; x))), \\ k: \text{Kind}, A: \text{es_realizer}\{i:l\}. \\ \text{R-Feasible}\{i:l\} \\ (A) \\ \Rightarrow (\neg(\uparrow \text{R-occurs}(A; i; x))) \\ \Rightarrow \text{fpf-compatible}(\text{Id}; x. \text{Type}; \text{id-deq}; ds; \text{R-ds}(A; i)) \\ \Rightarrow \text{fpf-compatible}(\text{Kind}; k. \text{Type}; \text{Kind-deq}; \text{fpf-single}(k; T); \text{R-da}(A; i)) \\ \Rightarrow ((\uparrow \text{isrcv}(k)) \Rightarrow \text{subtype_rel}(\text{fpf-cap}(\text{R-da}(A; \text{source}(\text{lnk}(k))); \text{Kind-deq}; k; \text{void}); T)) \\ \Rightarrow (\neg(\uparrow \text{write-restricted}(A; i; k))) \\ \Rightarrow (\forall y: \text{Id}. (\uparrow \text{fpf-dom}(\text{id-deq}; y; ds)) \Rightarrow (\neg(\uparrow \text{read-restricted}(A; i; y)))) \\ \Rightarrow \text{R-compat}\{i:l\} \\ (\text{Reflect}(i; ds; k; T; x; f); A) \end{aligned}$$