

## R-compat<sup>0,22</sup>

$A \parallel B$   
 $\equiv_{\text{def}}$  if Rplus?( $A$ ) $\rightarrow$  Rplus-left( $A$ )  $\parallel$   $B$  & Rplus-right( $A$ )  $\parallel$   $B$   
; Rplus?( $B$ ) $\rightarrow$   $A$   $\parallel$  Rplus-left( $B$ ) &  $A$   $\parallel$  Rplus-right( $B$ )  
; Rnone?( $A$ ) $\rightarrow$  True  
; Rnone?( $B$ ) $\rightarrow$  True  
; R-loc( $A$ ) = R-loc( $B$ ) $\rightarrow$   
  Rds( $A$ )  $\parallel$  Rds( $B$ ) & Rda( $A$ )  $\parallel$  Rda( $B$ )  
  & if R-base-domain( $A$ ) = R-base-domain( $B$ ) $\rightarrow$   $A = B$   
    else R-frame-compat( $A;B$ ) & R-frame-compat( $B;A$ ) fi  
  else R-interface-compat( $A;B$ ) & R-interface-compat( $B;A$ ) fi  
(*recursive*)

*clarification:*

R-compat{i:l}  
( $A; B$ )  
 $\equiv_{\text{def}}$  if Rplus?( $A$ ) $\rightarrow$  R-compat{i:l}(Rplus-left( $A$ );  $B$ ) & R-compat{i:l}(Rplus-right( $A$ );  $B$ )  
; Rplus?( $B$ ) $\rightarrow$  R-compat{i:l}(A; Rplus-left( $B$ )) & R-compat{i:l}(A; Rplus-right( $B$ ))  
; Rnone?( $A$ ) $\rightarrow$  True  
; Rnone?( $B$ ) $\rightarrow$  True  
; R-loc( $A$ ) = R-loc( $B$ ) $\rightarrow$   
  fpf-compatible(Id;  $x.Type_i$ ; IdDeq; Rds( $A$ ); Rds( $B$ ))  
  & fpf-compatible(Knd;  $x.Type_i$ ; KindDeq; Rda( $A$ ); Rda( $B$ ))  
  & if R-base-domain( $A$ ) = R-base-domain( $B$ ) $\rightarrow$   $A = B \in \text{es.realizer}\{i:l\}$   
    else R-frame-compat( $A;B$ ) & R-frame-compat( $B;A$ ) fi  
  else R-interface-compat( $A;B$ ) & R-interface-compat( $B;A$ ) fi  
(*recursive*)