

R-Feasible^{0,22}

R-Feasible(R)

\equiv_{def} case R of

Rnone \Rightarrow True

Rplus($left, right$) \Rightarrow $rec_1.rec_2.rec_1 \ \& \ rec_2 \ \& \ left \ || \ right$

Rinit(loc, T, x, v) \Rightarrow AtomFree(Type; T)

Rframe(loc, T, x, L) \Rightarrow Normal(T)

Rsframe(lnk, tag, L) \Rightarrow True

Reffect($loc, ds, knid, T, x, f$) \Rightarrow Normal(ds) $\ \& \$ Normal(T)

$\ \& \$ (isrcv($knid$) \Rightarrow $loc = \text{destination}(\text{lnk}(knid))$)

Rsends($ds, knid, T, l, dt, g$) \Rightarrow (isrcv($knid$)

\Rightarrow ($\text{lnk}(knid) = l \Rightarrow T = dt(\text{tag}(knid))?\text{Void}$)

$\ \& \ \text{destination}(\text{lnk}(knid)) = \text{source}(l)$)

$\ \& \$ Normal(T) $\ \& \$ Normal(ds)

$\ \& \$ Normal(dt)

Rpre(loc, ds, a, T, P) \Rightarrow Normal(T) $\ \& \$ Normal(ds) $\ \& \$ ($\forall s:\text{State}(ds). \text{Dec}(\exists v:T. P(s, v))$)

Raframe(loc, k, L) \Rightarrow True

Rbframe(loc, k, L) \Rightarrow True

Rrframe(loc, x, L) \Rightarrow True

clarification:

R-Feasible $\{i:l\}$

(R)

\equiv_{def} case R of

Rnone \Rightarrow True

Rplus($left, right$) \Rightarrow $rec_1.rec_2.rec_1 \ \& \ rec_2 \ \& \ \text{R-compat}\{i:l\}(left; right)$

Rinit(loc, T, x, v) \Rightarrow AtomFree(Type $_i$; T)

Rframe(loc, T, x, L) \Rightarrow normal-type $\{i:l\}$

(T)

Rsframe(lnk, tag, L) \Rightarrow True

Reffect($loc, ds, knid, T, x, f$) \Rightarrow normal-ds $\{i:l\}(ds) \ \& \ \text{normal-type}\{i:l\}(T)$

$\ \& \$ (isrcv($knid$) \Rightarrow $loc = \text{destination}(\text{lnk}(knid)) \in \text{Id}$)

Rsends($ds, knid, T, l, dt, g$) \Rightarrow (isrcv($knid$)

\Rightarrow ($\text{lnk}(knid) = l$

$\Rightarrow T = \text{fpf-cap}(dt; \text{IdDeq}; \text{tag}(knid); \text{Void}) \in \text{Type}_i$)

$\ \& \ \text{destination}(\text{lnk}(knid)) = \text{source}(l) \in \text{Id}$)

$\ \& \ \text{normal-type}\{i:l\}(T) \ \& \ \text{normal-ds}\{i:l\}(ds)$

$\ \& \ \text{normal-ds}\{i:l\}$

(dt)

Rpre(loc, ds, a, T, P) \Rightarrow normal-type $\{i:l\}$

(T)

$\ \& \ \text{normal-ds}\{i:l\}$

(ds)
& $(\forall s:\text{State}(ds). \text{Dec}(\exists v:T. P(s,v)))$
Riframe(loc,k,L) \Rightarrow True
Rbframe(loc,k,L) \Rightarrow True
Rrframe(loc,x,L) \Rightarrow True