

R-base-ma^{11,40}

$\text{R-base-ma}(R)$
 $\equiv_{\text{def}}$ case R of
 $\text{Rnone} \Rightarrow$
 $\text{Rplus}(left, right) \Rightarrow rec_1, rec_2.$
 $\text{Rinit}(loc, T, x, V) \Rightarrow$ case V
of $\text{inl}(v) \Rightarrow x : T$ initially $x = \lambda t.v$
| $\text{inr}(v) \Rightarrow x : T$ initially $x = v$
 $\text{Rframe}(loc, T, x, L) \Rightarrow$ only members of L affect $x : T$
 $\text{Rsframe}(lnk, tag, L) \Rightarrow$ only L sends on (lnk with tag)
 $\text{Reffect}(loc, ds, knd, T, x, F) \Rightarrow$ case F
of $\text{inl}(f) \Rightarrow$ with declarations
 $ds:ds$
 $da:knd : T$
effect of $knd(v)$ is $x := \lambda s, v, t. f(s, v) \text{ s } v$
| $\text{inr}(f) \Rightarrow$ with declarations
 $ds:ds$
 $da:knd : T$
effect of $knd(v)$ is $x := f \text{ s } v$
 $\text{Rsends}(ds, knd, T, l, dt, g) \Rightarrow$ with declarations
 $ds:ds$
 $da:knd : T \oplus \text{lnk-decl}(l; dt)$
 $knd(v)$ sends $g \text{ s } v$ on link l
 $\text{Rpre}(loc, ds, a, p, P) \Rightarrow$ (precondition $a:\text{Outcome}(p)$ is
 $P:\text{State}(ds) \rightarrow \text{Bool}$)
 $\text{Rkframe}(loc, k, L) \Rightarrow k$ affects only members of L
 $\text{Rksframe}(loc, k, L) \Rightarrow k$ sends only on links in L
 $\text{Rrframe}(loc, x, L) \Rightarrow$ only members of L read x

clarification:

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of $\text{inl}(f) \Rightarrow$ with declarations
 $ds:ds$

$da:knd : T$
 effect of $knd(v)$ is $x := \lambda s,v,t. f(s,v) \text{ s } v$
 $| \text{ inr}(f) \Rightarrow$ with declarations
 $ds:ds$
 $da:knd : T$
 effect of $knd(v)$ is $x := f \text{ s } v$
 $\text{Rsends}(ds,knd,T,l,dt,g) \Rightarrow$ with declarations
 $ds:ds$
 $da:\text{fpf-join}(\text{KindDeq};knd : T;\text{lnk-decl}(l;dt))$
 $knd(v)$ sends $g \text{ s } v$ on link l
 $\text{Rpre}(loc,ds,a,p,P) \Rightarrow$ (precondition $a:\text{Outcome}(p)$ is
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