w-machine-constraint[11,40]

w-machine-constraint(w)
$\equiv_{\text{def}}$ $\forall i$:Id.
let *Choose*,*Trans*,*Send* = w-machine(w;i) in
$\forall t$:ℕ.
($\neg$($\uparrow$isnull(a(i;t))))
$\Rightarrow$ ((λx.s(i;t+1).x) = (λx,q. *Trans*(kind(a(i;t)),val(a(i;t)),λx.s(i;t).x,x,q + 1))
& (($\uparrow$islocal(kind(a(i;t))))
$\Rightarrow$ ($\exists x$:ℕ
(($\uparrow$isl(*Choose*(act(kind(a(i;t))),x,λx.s(i;t).x(0))))
c$\wedge$ (val(a(i;t)) = outl(*Choose*(act(kind(a(i;t))),x,λx.s(i;t).x(0)))))))
& m(i;t) = *Send*(kind(a(i;t)),val(a(i;t)),λx.s(i;t).x(0)))

clarification:

w-machine-constraint(w)
$\equiv_{\text{def}}$ $\forall i$:Id.
let *Choose*,*Trans*,*Send* = w-machine(w;i) in
$\forall t$:ℕ.
($\neg$($\uparrow$w-isnull(w; w-a(w; i; t))))
$\Rightarrow$ ((λx.w-s(w; i; (t+1); x))
=
(λx,q. *Trans*
(w-kind(w; w-a(w; i; t))
,w-val(w; w-a(w; i; t))
,λx.w-s(w; i; t; x)
,x
,q + 1))
$\in$ x:Id$\rightarrow$ ℚ $\rightarrow$w-vartype(w; i; x)
& (($\uparrow$islocal(w-kind(w; w-a(w; i; t))))
$\Rightarrow$ ($\exists x$:ℕ
(($\uparrow$isl(*Choose*(act(w-kind(w; w-a(w; i; t))),x,λx.w-s(w; i; t; x)(0))))
c$\wedge$ (w-val(w; w-a(w; i; t))
=
outl(*Choose*(act(w-kind(w; w-a(w; i; t))),x,λx.w-s(w; i; t; x)(0)))
$\in$ w-valtype(w; i; w-a(w; i; t))))))
& w-m(w; i; t)
=
Send(w-kind(w; w-a(w; i; t)),w-val(w; w-a(w; i; t)),λx.w-s(w; i; t; x)(0))
$\in$ (Msg(w.M) List))

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http://www.nuprl.org/FDLcontent/p0_963683_/p30_495003_{w-machine-constraint}.html