pre-p[11,40]

pre-p(es; i; ds; a; p; P)
$\equiv_{\text{def}}$ ($\forall x$:Id. subtype_rel(es-vartype(es; i; x); fpf-cap(ds; id-deq; x; top)))
c$\wedge$ ((alle-at(es;
i;
e.((es-kind(es; e) = locl(a))
$\Rightarrow$ (subtype_rel(es-valtype(es; e); p-outcome(p))
c$\wedge$ ((↑(P(es-state-when(es; e))))
$\wedge$ (es-val(es; e)
=
random{2:n}(p; i; a)(es-kind-index(es; locl(a); e)))))))
$\wedge$ alle-at(es;
i;
e.existse-ge(es;
e;
e'.((es-kind(es; e') = locl(a))
$\vee$ ($\neg$($\forall t$:rationals.
↑(P(es-state-after-elapsed(es; e'; t)))))))))
$\wedge$ (($\forall t$:rationals. ↑(P(es-init-elapsed(es; i; t))))
$\Rightarrow$ ($\exists e$:es-E(es). (loc(e) = i))))

clarification:

pre-p(es; i; ds; a; p; P)
$\equiv_{\text{def}}$ ($\forall x$:Id. subtype_rel(es-vartype(es; i; x); fpf-cap(ds; id-deq; x; top)))
c$\wedge$ ((alle-at(es;
i;
e.((es-kind(es; e) = locl(a) $\in$ Knd)
$\Rightarrow$ (subtype_rel(es-valtype(es; e); p-outcome(p))
c$\wedge$ ((↑(P(es-state-when(es; e))))
$\wedge$ (es-val(es; e)
=
random{2:n}(p; i; a)(es-kind-index(es; locl(a); e))
$\in$ p-outcome(p))))))
$\wedge$ alle-at(es;
i;
e.existse-ge(es;
e;
e'.((es-kind(es; e') = locl(a) $\in$ Knd)
$\vee$ ($\neg$($\forall t$:rationals.
↑(P(es-state-after-elapsed(es; e'; t)))))))))
$\wedge$ (($\forall t$:rationals. ↑(P(es-init-elapsed(es; i; t))))
$\Rightarrow$ ($\exists e$:es-E(es). (es-loc(es; e) = i $\in$ Id))))

http://www.nuprl.org/FDLcontent/p0_963683_/p61_346366_{pre-p}.html