combine-ecl-trans-state2[11,40]

$\forall ds$:fpf(Id; x.Type), da:fpf(Knd; k.Type), A,B:ecl-trans-tuple{i:l}
(ds; da).
ecl-trans-normal(A)
$\Rightarrow$ ecl-trans-normal(B)
$\Rightarrow$ ($\forall n$:$\mathbb{N}$, L':(event-info(ds;da) List).
(ecl-trans-halt2(ds; da; A)(n,L'))
$\Rightarrow$ ($\forall L$:(event-info(ds;da) List).
iseg(event-info(ds;da); L'; L) $\Rightarrow$ (ecl-trans-halt2(ds; da; A)(n,L))))
$\Rightarrow$ ($\forall n$:$\mathbb{N}$, L':(event-info(ds;da) List).
(ecl-trans-halt2(ds; da; B)(n,L'))
$\Rightarrow$ ($\forall L$:(event-info(ds;da) List).
iseg(event-info(ds;da); L'; L) $\Rightarrow$ (ecl-trans-halt2(ds; da; B)(n,L))))
$\Rightarrow$ ($\forall n$:$\mathbb{N}^+$, L:(event-info(ds;da) List).
(ecl-trans-halt2(ds; da; A)(n,L)) $\Rightarrow$ ($n \in$ ecl-trans-es(A)))
$\Rightarrow$ ($\forall n$:$\mathbb{N}^+$, L:(event-info(ds;da) List).
(ecl-trans-halt2(ds; da; B)(n,L)) $\Rightarrow$ ($n \in$ ecl-trans-es(B)))
$\Rightarrow$ ($\forall f$:((?$\mathbb{B}$)$\rightarrow$($\mathbb{N} \rightarrow \mathbb{B}$)$\rightarrow$($\mathbb{N} \rightarrow \mathbb{B}$)$\rightarrow \mathbb{N} \rightarrow \mathbb{B}$), g:($\mathbb{B} \rightarrow \mathbb{B} \rightarrow \mathbb{B} \rightarrow \mathbb{B} \rightarrow \mathbb{B} \rightarrow \mathbb{B} \rightarrow \mathbb{B}$), L:(event-info(ds;da) List).
$\exists x$:?$\mathbb{B}$
((ecl-trans-state(combine-ecl-tuples2(A; B; f; g); L)
=
<ecl-trans-state(A; L), ecl-trans-state(B; L), x>
$\in$ ecl-trans-type(combine-ecl-tuples2(A; B; f; g)))
$\wedge$ ((x = (inl tt))
$\Longleftrightarrow$ ($\exists L'$:event-info(ds;da) List
$\exists m$:$\mathbb{N}$
(iseg(event-info(ds;da); L'; L)
$\wedge$ (ecl-trans-halt2(ds; da; A)(m,L'))
$\wedge$ ($\forall n$:$\mathbb{N}$, L'':(event-info(ds;da) List).
iseg(event-info(ds;da); L''; L')
$\Rightarrow$ (ecl-trans-halt2(ds; da; B)(n,L''))
$\Rightarrow$ (L'' = L'))
$\wedge$ ($\forall n$:int_seg(0; m). $\neg$(ecl-trans-halt2(ds; da; B)(n,L'))))))
$\wedge$ ((x = (inl ff))
$\Longleftrightarrow$ ($\exists L'$:event-info(ds;da) List
$\exists m$:$\mathbb{N}$
(iseg(event-info(ds;da); L'; L)
$\wedge$ (ecl-trans-halt2(ds; da; B)(m,L'))
$\wedge$ ($\forall n$:$\mathbb{N}$, L'':(event-info(ds;da) List).
iseg(event-info(ds;da); L''; L')
$\Rightarrow$ (ecl-trans-halt2(ds; da; A)(n,L''))
$\Rightarrow$ (L'' = L'))
$\wedge$ ($\forall n$:int_seg(0; (m + 1)). $\neg$(ecl-trans-halt2(ds; da; A)(n,L'))))))

$\wedge$ $((\neg(\uparrow\mathrm{isl}(x)))$
$\iff$ $(\forall m{:}\mathbb{N}.$
$(\neg(\text{ecl-trans-halt2}(ds;\ da;\ A)(m,L)))$ $\wedge$ $(\neg(\text{ecl-trans-halt2}(ds;\ da;\ B)(m,L)))))))$

http://www.nuprl.org/FDLcontent/p0_963683_/p51_286759_{combine-ecl-trans-state2}.html