chain-consistent-input-continuity[13,45]

$\forall es$:ES, Cmd:Type, In:AbsInterface(Cmd), $isupdate$:($Cmd \rightarrow \mathbb{B}$), Sys, Out:AbsInterface(Top).
(E(In) $\subseteq$r E(Sys))
$\Rightarrow$ (E(Out) $\subseteq$r E(Sys))
$\Rightarrow$ ($\forall e$:E(In). ($\neg(\uparrow(isupdate(In(e))))$) $\Rightarrow$ ($\uparrow(e \in_b Out)$))
$\Rightarrow$ ($\forall f$:sys-antecedent(es;Sys).
($\forall u$:E(Sys). ($f(u) = u \in$ E) $\Rightarrow$ ($\uparrow(u \in_b In)$))
$\Rightarrow$ fifo-antecedent(es;Sys;f)
$\Rightarrow$ ($\forall e$:E(In). $f(e) = e \in$ E)
$\Rightarrow$ ($\forall chain$:(E(Sys)$\rightarrow$(Id List)).
chain-consistent(f;$chain$)
$\Rightarrow$ ($\forall a_1$, a_2:E(Sys), e_1, e_2:E(In).
($\uparrow(isupdate(In(e_1)))$)
$\Rightarrow$ ($\uparrow(isupdate(In(e_2)))$)
$\Rightarrow$ e_1 is $f*(a_1)$
$\Rightarrow$ e_2 is $f*(a_2)$
$\Rightarrow$ ($a_1 <$loc a_2)
$\Rightarrow$ ($\exists e$:E(Sys). ($e \leq$loc e_2 & e_1 is $f*(e)$ & e is $f*(a_1)$))))))

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http://www.nuprl.org/FDLcontent/p0_963683_/p0_953355_{chain-consistent-input-continuity}.html