

acks-chain-consistent^{13,45}

$\forall es:ES, Out, Sys:AbsInterface(Top), Ack:AbsInterface(\mathbb{N}), g:sys\text{-}antecedent(es;Ack),$
 $chain:(\{e:E \mid (\uparrow(e \in_b Sys)) \vee (\uparrow(e \in_b Ack))\} \rightarrow (Id\ List)).$
 $(E(Out) \subseteq_r E(Sys))$
 $\Rightarrow chain\text{-}config(es;p\text{-}conditional(Ack; Sys);chain)$
 $\Rightarrow (\forall e:E(Sys). (\uparrow(e \in_b Out)) \Rightarrow (loc(e) = last(chain(e)) \in Id))$
 $\Rightarrow (\forall e:E(Ack).$
 $\quad (\neg(loc(g(e)) = loc(e) \in Id))$
 $\quad \Rightarrow (adjacent(Id;chain(e);loc(e);loc(g(e)))$
 $\quad \quad \& adjacent(Id;chain(g(e));loc(e);loc(g(e))))$
 $\Rightarrow (\forall e:E(Ack). (loc(g(e)) = loc(e) \in Id) \Rightarrow (\uparrow(e \in_b Out)))$
 $\Rightarrow chain\text{-}consistent(g;\lambda e.rev(chain(e)))$