

chain-order-total^{13,45}

$\forall es:ES, Cmd:Type, In:AbsInterface(Cmd), isupdate:(Cmd \rightarrow \mathbb{B}), Sys, Out:AbsInterface(Top).$
 $(E(In) \subseteq_r E(Sys))$
 $\Rightarrow (\forall f:sys\text{-antecedent}(es;Sys), chain:(E(Sys) \rightarrow (Id\ List)).$
 $chain\text{-consistent}(f;chain)$
 $\Rightarrow (\forall e, e':E(Sys). loc(e) \ll loc(e') \vee (loc(e) = loc(e') \in Id) \vee loc(e') \ll loc(e))$)