chain-order-le_transitivity[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-antecedent(es;Sys), $chain$:(E(Sys)$\rightarrow$(Id List)).
chain-consistent(f;$chain$) $\Rightarrow$ ($\forall x$, y, z:Id. $x <<= y \Rightarrow y <<= z \Rightarrow x <<= z$))

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http://www.nuprl.org/FDLcontent/p0_963683_/p39_829274_{chain-order-le_transitivity}.html