

## es-hist-is-append<sup>0,22</sup>

$\forall ds:x:\text{Id} \text{ fp} \rightarrow \text{Type}, da:k:\text{Kind} \text{ fp} \rightarrow \text{Type}, es:\text{ES}, i:\text{Id}, e_1, e_2:\{e:\text{E} \mid \text{loc}(e) = i\}, L_1,$   
 $L_2:\text{event-info}(ds;da) \text{ List}.$   
 $\neg L_1 = \text{nil}$   
 $\Rightarrow \neg L_2 = \text{nil}$   
 $\Rightarrow (\forall x:\text{Id}. \text{vartype}(i;x) \subseteq \rho \text{ } ds(x)?\text{Top})$   
 $\Rightarrow (\forall e:\text{E}. \text{loc}(e) = i \Rightarrow \text{valtype}(e) \subseteq \rho \text{ } da(\text{kind}(e))?\text{Top})$   
 $\Rightarrow \text{es-hist}\{i:l\}(es;e_1;e_2) = (L_1 @ L_2) \in \text{event-info}(ds;da) \text{ List}$   
 $\Rightarrow \exists e \in (e_1, e_2). \text{es-hist}\{i:l\}(es;e_1;\text{pred}(e)) = L_1 \ \& \ \text{es-hist}\{i:l\}(es;e;e_2) = L_2$