

es-hist-is-concat^{11,40}

$\forall ds:\text{fpf}(\text{Id}; x.\text{Type}), da:\text{fpf}(\text{Knd}; k.\text{Type}), es:\text{event_system}\{i:l\}, i:\text{Id},$
 $LL:(\text{event-info}(ds;da) \text{ List List}), e_1, e_2:\{e:\text{es-E}(es) \mid \text{loc}(e) = i\},$
 $L:(\text{event-info}(ds;da) \text{ List}).$
 $\text{l.all}(LL; (\text{event-info}(ds;da) \text{ List}); L.(\neg(L = [])))$
 $\Rightarrow (\neg(L = []))$
 $\Rightarrow (\forall x:\text{Id}. \text{subtype_rel}(\text{es-vartype}(es; i; x); \text{fpf-cap}(ds; \text{id-deq}; x; \text{top})))$
 $\Rightarrow (\forall e:\text{es-E}(es).$
 $\quad (\text{loc}(e) = i)$
 $\quad \Rightarrow \text{subtype_rel}(\text{es-valtype}(es; e); \text{fpf-cap}(da; \text{Kind-deq}; \text{es-kind}(es; e); \text{top})))$
 $\Rightarrow (\text{es-hist}\{i:l\}(es; e_1; e_2) = \text{append}(\text{concat}(LL); L) \in (\text{event-info}(ds;da) \text{ List}))$
 $\Rightarrow (\exists f:\text{int_seg}(0; (\|LL\| + 1)) \rightarrow \{e:\text{es-E}(es) \mid \text{loc}(e) = i\}$
 $\quad ((f(0) = e_1) \wedge \text{es-le}(es; (f(\|LL\|)); e_2))$
 $\quad c \wedge (\forall i:\text{int_seg}(0; \|LL\|). \text{es-locl}(es; (f(i)); (f(i + 1))))$
 $\quad c \wedge ((\forall i:\text{int_seg}(0; \|LL\|).$
 $\quad \quad \text{es-hist}\{i:l\}(es; f(i); \text{es-pred}(es; (f(i + 1)))) = LL[i] \in (\text{event-info}(ds;da) \text{ List}))$
 $\quad \wedge (\text{es-hist}\{i:l\}(es; f(\|LL\|); e_2) = L))))$