

SES-implies-ES^{11,40}

$\forall E:\text{Type}, eq:\text{EqDecider}(E), T:(\text{Id}\rightarrow\text{Id}\rightarrow\text{Type}), V:(\text{Knd}\rightarrow\text{Id}\rightarrow\text{Type}),$
 $info:(E\rightarrow((:\text{Id}\times\text{Id})+(\text{IdLnk}\times E)\times\text{Id})), pred?:(E\rightarrow(?E)),$
 $val:(e:E\rightarrow V(\text{kind}(e),\text{loc}(e))), when, after:(x:\text{Id}\rightarrow e:E\rightarrow\mathbb{Q}\rightarrow T(\text{loc}(e),x)), time:(E\rightarrow\mathbb{Q}),$
 $p:\text{SESAxioms}\{i:l\}(E;T;pred?;info;when;after;time).$
 $\text{ESAxioms}\{i:l\}(E;T;\lambda l,tg. V(\text{rcv}(l,tg),\text{destination}(l));\lambda e.\text{loc}(e);\lambda e.$
 $\text{kind}(e);val;when;after;time;\lambda l,e. \text{sends}(eq;\text{IdLnkDeq};pred?;info;val;p.1;e;l);\lambda e.$
 $\text{sender}(e);\lambda e.\text{index}(eq;\text{IdLnkDeq};pred?;info;p.1;e);\lambda e.\text{first}(e);\lambda e.\text{pred}(e);\lambda e,e'. e < e')$