

## combine-ecl-trans-state1<sup>11,40</sup>

$$\begin{aligned} & \forall ds:\text{fpf}(\text{Id}; x.\text{Type}), da:\text{fpf}(\text{Knd}; k.\text{Type}), A,B:\text{ecl-trans-tuple}\{i:l\}(ds; da), \\ & f:(\mathbb{N} \rightarrow \mathbb{B}) \rightarrow (\mathbb{N} \rightarrow \mathbb{B}) \rightarrow \mathbb{N} \rightarrow \mathbb{B}, g:(\mathbb{B} \rightarrow \mathbb{B} \rightarrow \mathbb{B}), L,L_1,l:(\text{event-info}(ds;da) \text{ List}). \\ & (L = \text{append}(L_1; l)) \\ & \Rightarrow (\forall L':(\text{event-info}(ds;da) \text{ List}). \\ & \quad \text{iseg}(\text{event-info}(ds;da); L'; L) \\ & \quad \Rightarrow (\text{iseg}(\text{event-info}(ds;da); L_1; L') \iff (\uparrow(\text{ecl-trans-h}(A)(0,\text{ecl-trans-state}(A; L')))))))) \\ & \Rightarrow (\text{ecl-trans-state}(\text{combine-ecl-tuples}(A; B; f; g); L) \\ & \quad = \\ & \quad \langle \text{ecl-trans-state}(A; L), \text{ecl-trans-state}(B; l) \rangle \\ & \quad \in \text{ecl-trans-type}(\text{combine-ecl-tuples}(A; B; f; g))) \end{aligned}$$