

## trigger1-p<sup>11,40</sup>

@i k(v:T) triggers local action a

when P (x:A) v

$$\begin{aligned} \equiv_{\text{def}} & \text{vartype}(i;x) \subseteq_r A \ \& \ \forall e@i. (\text{kind}(e) = k) \Rightarrow (\text{valtype}(e) \subseteq_r T) \\ & \ \& \ \forall e'@i. \\ & \quad (\text{kind}(e') = \text{locl}(a)) \\ & \quad \Rightarrow (\exists e:\mathbb{E}. ((e <_{\text{loc}} e') \ \& \ \text{kind}(e) = k \ \& \ (\uparrow(P((x \text{ when } e), \text{val}(e)))))) \\ & \ \& \ \forall e@i. (\text{kind}(e) = k) \Rightarrow (\uparrow(P((x \text{ when } e), \text{val}(e)))) \Rightarrow \exists e'@i. \text{kind}(e') = \text{locl}(a) \end{aligned}$$

*clarification:*

trigger1-p(es;T;A;P;i;k;a;x)

$$\begin{aligned} \equiv_{\text{def}} & \text{es-vartype}(es; i; x) \subseteq_r A \\ & \ \& \ \text{alle-at}(es;i;e.(\text{es-kind}(es; e) = k \in \text{Knd})) \Rightarrow (\text{es-valtype}(es; e) \subseteq_r T) \\ & \ \& \ \text{alle-at}(es;i;e'.(\text{es-kind}(es; e') = \text{locl}(a) \in \text{Knd})) \\ & \quad \Rightarrow (\exists e:\text{es-}\mathbb{E}(es) \\ & \quad \quad (\text{es-locl}(es; e; e') \\ & \quad \quad \ \& \ \text{es-kind}(es; e) = k \in \text{Knd} \\ & \quad \quad \ \& \ (\uparrow(P(\text{es-when}(es; x; e), \text{es-val}(es; e)))))) \\ & \ \& \ \text{alle-at}(es;i;e.(\text{es-kind}(es; e) = k \in \text{Knd})) \\ & \quad \Rightarrow (\uparrow(P(\text{es-when}(es; x; e), \text{es-val}(es; e)))) \\ & \quad \Rightarrow \text{existse-at}(es; i; e'.(\text{es-kind}(es; e') = \text{locl}(a) \in \text{Knd})) \end{aligned}$$