

recognizer-p^{11,40}

$$\begin{aligned} & \text{recognizer-p}(es;T;A;P;k;i;r;x) \\ \equiv_{\text{def}} & \forall e@i. (\text{kind}(e) = k) \Rightarrow (\text{valtype}(e) \subseteq_r T) \ \& \ (\text{vartype}(i;x) \subseteq_r A) \\ & \ \& \ @i(r;\mathbb{B}) \\ & \ \& \ \forall e@i. (\uparrow \text{first}(e)) \Rightarrow ((r \text{ when } e) = \text{ff}) \\ & \ \& \ \forall e@i. \\ & \ \quad (\uparrow(r \text{ after } e)) \\ & \ \quad \iff (\exists e':\mathbb{E}. ((e' \leq_{\text{loc}} e \ \& \ \text{kind}(e') = k) \ c \wedge (\uparrow(P((x \text{ when } e'), \text{val}(e')))))) \end{aligned}$$

clarification:

$$\begin{aligned} & \text{recognizer-p}(es;T;A;P;k;i;r;x) \\ \equiv_{\text{def}} & \text{alle-at}(es;i;e.(\text{es-kind}(es; e) = k \in \text{Knd}) \Rightarrow (\text{es-valtype}(es; e) \subseteq_r T)) \\ & \ \& \ (\text{es-vartype}(es; i; x) \subseteq_r A) \\ & \ \& \ \text{es-dtype}(es;i;r;\mathbb{B}) \\ & \ \& \ \text{alle-at}(es;i;e.(\uparrow \text{es-first}(es; e)) \Rightarrow (\text{es-when}(es; r; e) = \text{ff} \in \mathbb{B})) \\ & \ \& \ \text{alle-at}(es;i;e.(\uparrow \text{es-after}(es; r; e)) \\ & \ \quad \iff (\exists e':\text{es-}\mathbb{E}(es) \\ & \ \quad \quad ((\text{es-le}(es;e';e) \ \& \ \text{es-kind}(es; e') = k \in \text{Knd}) \\ & \ \quad \quad \ c \wedge (\uparrow(P(\text{es-when}(es; x; e'), \text{es-val}(es; e')))))) \end{aligned}$$