

es-only-sender^{0,22}

only $k(v):B$ sends $[tg, f(s;v)] : T$ on l
 $\equiv_{\text{def}} (\forall e:\mathbf{E}.$
 $\text{loc}(e) = \text{source}(l) \Rightarrow \text{kind}(e) = k \Rightarrow (\exists e':\mathbf{E}. \text{kind}(e') = \text{rcv}(l, tg) \ \& \ \text{sender}(e') = e)$
 $\& (\forall e':\mathbf{E}.$
 $\text{kind}(e') = \text{rcv}(l, tg)$
 $\Rightarrow \text{kind}(\text{sender}(e')) = k$
 $\& \text{valtype}(\text{sender}(e')) \subseteq \rho B$
 $\& \text{valtype}(e') \subseteq \rho T$
 $\& \text{val}(e') = f((\text{state when sender}(e')); \text{val}(\text{sender}(e'))))$
 $\& (\forall e'':\mathbf{E}. \text{kind}(e'') = \text{rcv}(l, tg) \Rightarrow \text{sender}(e'') = \text{sender}(e') \Rightarrow e'' = e'))$

clarification:

es-only-sender($es; k; B; l; tg; T; s, v. f(s;v)$)
 $\equiv_{\text{def}} (\forall e:\text{es-E}(es).$
 $\text{es-loc}(es; e) = \text{source}(l) \in \text{Id}$
 $\Rightarrow \text{es-kind}(es; e) = k \in \text{Knd}$
 $\Rightarrow (\exists e':\text{es-E}(es).$
 $\text{es-kind}(es; e') = \text{rcv}(l, tg) \in \text{Knd} \ \& \ \text{es-sender}(es; e') = e \in \text{es-E}(es)))$
 $\& (\forall e':\text{es-E}(es).$
 $\text{es-kind}(es; e') = \text{rcv}(l, tg) \in \text{Knd}$
 $\Rightarrow \text{es-kind}(es; \text{es-sender}(es; e')) = k \in \text{Knd}$
 $\& \text{es-valtype}(es; \text{es-sender}(es; e')) \subseteq \rho B$
 $\& \text{es-valtype}(es; e') \subseteq \rho T$
 $\& \text{es-val}(es; e')$
 $=$
 $f(\text{es-state-when}(es; \text{es-sender}(es; e')); \text{es-val}(es; \text{es-sender}(es; e'))))$
 $\in T$
 $\& (\forall e'':\text{es-E}(es).$
 $\text{es-kind}(es; e'') = \text{rcv}(l, tg) \in \text{Knd}$
 $\Rightarrow \text{es-sender}(es; e'') = \text{es-sender}(es; e') \in \text{es-E}(es)$
 $\Rightarrow e'' = e' \in \text{es-E}(es)))$