

## s-effect-rule<sup>0,22</sup>

$\forall i, x:\text{Id}, k:\text{Knd}, ds:a:\text{Id} \text{ fp} \rightarrow \text{Type}, da:a:\text{Knd} \text{ fp} \rightarrow \text{Type},$   
 $f:(\text{State}(ds) \rightarrow \text{Valtype}(da;k) \rightarrow ds(x)?\text{Void}).$   
@ $i$ : with declarations  $ds:dsda:daeffect$  of  $k(v)$  is  $x := f \text{ s } v \in \text{Dsys}$   
&  $(\forall D:\text{Dsys}.$   
  @ $i$ : with declarations  $ds:dsda:daeffect$  of  $k(v)$  is  $x := f \text{ s } v \subseteq D$   
   $\Rightarrow D$   
  realizes  $es$ .  
   $(\forall x:\text{Id}. \text{vartype}(i;x) \subseteq \rho \text{ } ds(x)?\text{Top})$   
  &  $(\forall e:\text{E}. \text{loc}(e) = i \in \text{Id} \Rightarrow \text{valtype}(e) \subseteq \rho \text{ Valtype}(da;\text{kind}(e)))$   
  &  $((\text{isrcv}(k) \Rightarrow \text{destination}(\text{lnk}(k)) = i) \Rightarrow \text{kindtype}(i;k) \subseteq \rho \text{ Valtype}(da;k))$   
  &  $(\forall e:\text{E}.$   
     $\text{loc}(e) = i \in \text{Id}$   
     $\Rightarrow \text{kind}(e) = k \in \text{Knd}$   
     $\Rightarrow (x \text{ after } e) = f((\text{state when } e), \text{val}(e)) \in ds(x)?\text{Top})$