

## effect-rule1<sup>0,22</sup>

$\forall i, x, y: \text{Id}, k: \text{Kind}, T, A, B: \text{Type}, f: (A \rightarrow B \rightarrow T \rightarrow A).$

$\neg y = x$

$\Rightarrow @i: \text{ma-single-effect1}(x; A; y; B; k; T; f) \in \text{Dsys}$

&  $(\forall D: \text{Dsys}.$

$@i: \text{ma-single-effect1}(x; A; y; B; k; T; f) \subseteq D$

$\Rightarrow D$

realizes  $es$ .

$\text{vartype}(i; x) \subseteq \rho A$  &  $\text{vartype}(i; y) \subseteq \rho B$

&  $(\forall e: E. \text{loc}(e) = i \in \text{Id} \Rightarrow \text{kind}(e) = k \in \text{Kind} \Rightarrow \text{valtype}(e) \subseteq \rho T)$

&  $(\forall e: E.$

$\text{loc}(e) = i \in \text{Id}$

$\Rightarrow \text{kind}(e) = k \in \text{Kind}$

$\Rightarrow (x \text{ after } e) = f((x \text{ when } e), y \text{ when } e, \text{val}(e)) \in A)$