

w-machine-independent^{11,40}

$\text{w-machine-independent}(w; i; k; x)$
 $\equiv_{\text{def}} \text{let } Choose, Trans, Send = \text{w-machine}(w; i) \text{ in}$
 $\quad \forall s_1, s_2: (x: \text{Id} \rightarrow \mathbb{Q} \rightarrow \text{vartype}(i; x)).$
 $\quad (\forall z: \text{Id}. (\neg(z = x)) \Rightarrow (s_1(z) = s_2(z)))$
 $\Rightarrow ((\forall v: \text{w-kindtype}(w. \text{TA}(i); w. \text{M}; i)(k).$
 $\quad (\forall z: \text{Id}. (\neg(z = x)) \Rightarrow (Trans(k, v, s_1, z) = Trans(k, v, s_2, z)))$
 $\quad \& Send(k, v, \lambda x. s_1(x, 0)) = Send(k, v, \lambda x. s_2(x, 0)))$
 $\quad \& ((\uparrow \text{islocal}(k))$
 $\quad \Rightarrow (\forall n: \mathbb{N}. Choose(\text{act}(k), n, \lambda x. s_1(x, 0)) = Choose(\text{act}(k), n, \lambda x. s_2(x, 0))))))$

clarification:

$\text{w-machine-independent}(w; i; k; x)$
 $\equiv_{\text{def}} \text{let } Choose, Trans, Send = \text{w-machine}(w; i) \text{ in}$
 $\quad \forall s_1: (x: \text{Id} \rightarrow \mathbb{Q} \rightarrow \text{w-vartype}(w; i; x)), s_2: (x: \text{Id} \rightarrow \mathbb{Q} \rightarrow \text{w-vartype}(w; i; x)).$
 $\quad (\forall z: \text{Id}. (\neg(z = x \in \text{Id})) \Rightarrow (s_1(z) = s_2(z) \in \mathbb{Q} \rightarrow \text{w-vartype}(w; i; z)))$
 $\Rightarrow ((\forall v: \text{w-kindtype}(w. \text{TA}(i); w. \text{M}; i)(k).$
 $\quad (\forall z: \text{Id}.$
 $\quad (\neg(z = x \in \text{Id})) \Rightarrow (Trans(k, v, s_1, z) = Trans(k, v, s_2, z) \in \mathbb{Q} \rightarrow \text{w-vartype}(w; i; z)))$
 $\quad \& Send(k, v, \lambda x. s_1(x, 0)) = Send(k, v, \lambda x. s_2(x, 0)) \in (\text{w-Msg}(w) \text{ List}))$
 $\quad \& ((\uparrow \text{islocal}(k))$
 $\quad \Rightarrow (\forall n: \mathbb{N}.$
 $\quad \quad Choose(\text{act}(k), n, \lambda x. s_1(x, 0))$
 $\quad \quad =$
 $\quad \quad Choose(\text{act}(k), n, \lambda x. s_2(x, 0))$
 $\quad \quad \in ((\text{w-kindtype}(w. \text{TA}(i); w. \text{M}; i)(k)) + \text{Unit}))))$