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CONTEXT SimpleContext

CONSTANTS

AGES

AXIOMS

axm_0: $AGES \subseteq \mathbb{N}$

axm_1: $finite(AGES)$

axm_2: $card(AGES) < 100$

END

MACHINE Simple

SEES SimpleContext

VARIABLES

from

to

INVARIANTS

inv_0: $from \in \mathbb{N}$

inv_1: $to \in \mathbb{N}$

EVENTS

Initialisation

begin

init_0: $from := \mathbb{N}$

init_1: $to := 0$

end

Event copy $\langle \text{ordinary} \rangle \hat{=}$

begin

act_0: $to := from$

end

END

MACHINE Simple0**REFINES** Simple**SEES** SimpleContext**VARIABLES**

from
 to
 tmp
 copying

INVARIANTS

inv0_1: $tmp \in \mathbb{N}$
inv0_2: $copying \in \text{BOOL}$
inv0_3: $copying = \text{TRUE} \Rightarrow tmp = from$

EVENTS**Initialisation** $\langle \text{extended} \rangle$ **begin**

init_0: $from : \in \mathbb{N}$
init_1: $to := 0$
init0_1: $tmp : \in \mathbb{N}$
init0_2: $copying := \text{FALSE}$

end**Event** copyStart $\langle \text{ordinary} \rangle \hat{=}$ **when***grd0_1:* $copying = \text{FALSE}$ **then**

act0_1: $tmp := from$
act0_2: $copying := \text{TRUE}$

end**Event** copyDone $\langle \text{ordinary} \rangle \hat{=}$ **refines** copy**when***grd0_1:* $copying = \text{TRUE}$ **then**

act0_1: $to := tmp$
grd0_2: $copying := \text{FALSE}$

end**END**