

Contents

CONTEXT SimpleContext	2
MACHINE Simple	3
MACHINE Simple1	4

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: $from := 0$

init_1: $to := 0$

end

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

begin

act_0: $to := from$

end

END

MACHINE Simple1**REFINES** Simple**SEES** SimpleContext**VARIABLES**

from

to

tmp

copying

INVARIANTS*inv1.1:* $tmp \in \mathbb{N}$ *inv1.2:* $copying \in \text{BOOL}$ *inv1.3:* $copying = \text{TRUE} \Rightarrow tmp = from$ **EVENTS****Initialisation** $\langle \text{extended} \rangle$ **begin***init.0:* $from : \in \mathbb{N}$ *init.1:* $to := 0$ *init1.1:* $tmp : \in \mathbb{N}$ *init1.2:* $copying := \text{FALSE}$ **end****Event** copyStart $\langle \text{ordinary} \rangle \hat{=}$ **when***grd1.1:* $copying = \text{FALSE}$ **then***act1.1:* $tmp := from$ *act1.2:* $copying := \text{TRUE}$ **end****Event** copyDone $\langle \text{ordinary} \rangle \hat{=}$ **refines** copy**when***grd1.1:* $copying = \text{TRUE}$ **then***act1.1:* $to := tmp$ *grd1.2:* $copying := \text{FALSE}$ **end****END**