

t15_fsm_1

(TMYHKozr5hprJBZaf59UsVVyWtxsU2hfB)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.((\neg v2_struct_0 X2) \wedge (l2_fsm_1 X2 X0 X1)) \Rightarrow (\forall X3. \\ & ((\neg v2_struct_0 X3) \wedge (l2_fsm_1 X3 X0 X1)) \Rightarrow ((r4_fsm_1 X0 X1 X2 X3) \Leftrightarrow \\ & (\forall X4.(m2_finseq_1 X4 X0) \Rightarrow (k4_fsm_1 X0 X1 X2 (u2_fsm_1 X0 \\ & X2) X4 = k4_fsm_1 X0 X1 X3 (u2_fsm_1 X0 X3) X4)))))) \end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.((\neg v2_struct_0 X2) \wedge (l2_fsm_1 X2 X0 X1)) \Rightarrow (\forall X3. \\ & ((\neg v2_struct_0 X3) \wedge (l2_fsm_1 X3 X0 X1)) \Rightarrow (\forall X4.((\neg v2_struct_0 \\ & X4) \wedge (l2_fsm_1 X4 X0 X1)) \Rightarrow (((r4_fsm_1 X0 X1 X2 X3) \wedge (r4_fsm_1 X0 X1 \\ & X3 X4)) \Rightarrow (r4_fsm_1 X0 X1 X2 X4)))))) \end{aligned}$$