

t10_fsm_2

(TMG3pyHP7eUZNNioExF3XUxLfuTGwWLHt2N)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_fsm_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_fsm_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u2_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & (l1_fsm_1 X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow \\ & (r1_fsm_1 X0 X1 (k6_finseq_1 X0) X2 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(l1_fsm_1 X1 X0) \Rightarrow (m1_subset_1 (u2_fsm_1 X0 X1) (u1_struct_0 X1)) \quad (2)$$

Assume the following.

$$\forall X0.m2_finseq_1 (k6_finseq_1 X0) X0 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & (l1_fsm_1 X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow \\ & ((v2_fsm_2 X2 X0 X1) \Leftrightarrow (\exists X3.(m2_finseq_1 X3 X0) \wedge (r1_fsm_1 \\ & X0 X1 X3 (u2_fsm_1 X0 X1) X2)))))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & (l1_fsm_1 X1 X0)) \Rightarrow (v2_fsm_2 (u2_fsm_1 X0 X1) X0 X1)) \end{aligned}$$