

## l3\_translac

(TMHReu572iTrZmii8QXgB5h3sQLoUnpWDjm)

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Let  $v7\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_diraf : \iota \Rightarrow o$  be given. Let  $l1\_analoaf : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
 & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
 & \quad X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 & \quad \quad X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. \\
 & \quad (m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (((r1\_aff\_1 X0 X1 X2 X3) \wedge ((r1\_aff\_1 \\
 & \quad X0 X1 X2 X4) \wedge (r1\_aff\_1 X0 X1 X2 X5)))) \Rightarrow ((X1 = X2) \vee (r1\_aff\_1 X0 X3 X4 \\
 & \quad \quad X5)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
 & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
 & \quad X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_aff\_1 X0 X1 X1 X2) \wedge ((r1\_aff\_1 X0 X1 X2 \\
 & \quad \quad X2) \wedge (r1\_aff\_1 X0 X1 X2 X1))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
 & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
 & \quad X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 & \quad \quad X0)) \Rightarrow ((r1\_aff\_1 X0 X1 X2 X3) \Rightarrow ((r1\_aff\_1 X0 X1 X3 X2) \wedge ((r1\_aff\_1 \\
 & \quad X0 X2 X1 X3) \wedge ((r1\_aff\_1 X0 X2 X3 X1) \wedge ((r1\_aff\_1 X0 X3 X1 X2) \wedge (r1\_aff\_1 \\
 & \quad \quad X0 X3 X2 X1))))))))))
 \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& \quad X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\neg(r1\_aff\_1 \\
& X0 X1 X2 X3) \wedge ((X1 \neq X2) \wedge ((X1 \neq X3) \wedge ((X2 \neq X3) \wedge ((\neg r1\_aff\_1 X0 X1 X2 X4) \wedge \\
& \quad (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\neg(r1\_aff\_1 X0 \\
& \quad X4 X1 X5) \wedge ((X4 \neq X5) \wedge (X1 \neq X5)))))))))))))) \\
& \tag{4}
\end{aligned}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& \quad X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. \\
& (m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\neg(r1\_aff\_1 X0 X1 X2 X3) \wedge ((X1 \neq \\
& X2) \wedge ((X1 \neq X3) \wedge ((X2 \neq X3) \wedge ((\neg r1\_aff\_1 X0 X1 X2 X4) \wedge ((r1\_aff\_1 X0 \\
& \quad X1 X2 X5) \wedge (\forall X6.(m1\_subset\_1 X6 (u1\_struct\_0 X0)) \Rightarrow (\neg(r1\_aff\_1 \\
& \quad X0 X4 X5 X6) \wedge ((X4 \neq X6) \wedge (X5 \neq X6)))))))))))))) \\
& \tag{4}
\end{aligned}$$