

Inference at *
of proof for Lemma trans_imp_sp_trans_b:

$\vdash \forall T:\text{Type}, R:(T \rightarrow T \rightarrow \mathbb{P}).$
 $\text{Trans}(T;a,b.R(a,b))$
 $\Rightarrow \{\forall a, b, c:T. \text{strict_part}(x,y.R(x,y);a;b) \Rightarrow R(b,c) \Rightarrow \text{strict_part}(x,y.R(x,y);a;c)\}$
by (((Unfolds “trans strict_part guard“ 0)
CollapseTHEN (GenRepD)).
CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term))).

1:

1. $T : \text{Type}$
2. $R : T \rightarrow T \rightarrow \mathbb{P}$
3. $\forall a, b, c:T. R(a,b) \Rightarrow R(b,c) \Rightarrow R(a,c)$
4. $a : T$
5. $b : T$
6. $c : T$
7. $R(a,b)$
8. $\neg R(b,a)$
9. $R(b,c)$
- $\vdash R(a,c)$

2:

1. $T : \text{Type}$
2. $R : T \rightarrow T \rightarrow \mathbb{P}$
3. $\forall a, b, c:T. R(a,b) \Rightarrow R(b,c) \Rightarrow R(a,c)$
4. $a : T$
5. $b : T$
6. $c : T$
7. $R(a,b)$
8. $\neg R(b,a)$
9. $R(b,c)$
- $\vdash \neg R(c,a)$