Inference at $*$
of proof for Lemma trans_imp_sp_trans:

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

1:

1. $T$ : Type
2. $R$ : $T \to T \to \mathbb{P}$
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. $R(b,c)$
10. $\neg R(c,b)$

$\vdash R(a,c)$

2:

1. $T$ : Type
2. $R$ : $T \to T \to \mathbb{P}$
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. $R(b,c)$
10. $\neg R(c,b)$

$\vdash \neg R(c,a)$

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_79516_{trans_imp_sp_trans}.html