Inference at $*$
of proof for Lemma trans_rel_func_wrt_sym_self:

$\vdash \forall T$:Type, R:($T \rightarrow T \rightarrow \mathbb{P}$).
Trans(T;x,y.R(x,y))
$\Rightarrow$ {$\forall a$, a', b, b':T.
Symmetrize(x,y.R(x,y);a;b) $\Rightarrow$ Symmetrize(x,y.R(x,y);a';b') $\Rightarrow$ (R(a,a') $\iff$ R(b,b'))}
by ((((Unfolds “symmetrize guard“ 0)
CollapseTHENM (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 : $T \rightarrow T \rightarrow \mathbb{P}$
3. Trans(T;x,y.R(x,y))
4. a : T
5. a' : T
6. b : T
7. b' : T
8. R(a,b)
9. R(b,a)
10. R(a',b')
11. R(b',a')
12. R(a,a')

$\vdash$ R(b,b')

2:

1. T : Type
2. R : $T \rightarrow T \rightarrow \mathbb{P}$
3. Trans(T;x,y.R(x,y))
4. a : T
5. a' : T
6. b : T
7. b' : T
8. R(a,b)
9. R(b,a)
10. R(a',b')
11. R(b',a')
12. R(b,b')

$\vdash$ R(a,a')

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_81393_{trans_rel_func_wrt_sym_self}.html