Inference at $*$ 1
of proof for Lemma quotient_wf:

1. T : Type
2. E : $T \to T \to \mathbb{P}$
3. EquivRel(T;x,y.$E(x,y)$)
$\vdash (x,y{:}T//E(x,y)) \in$ Type
by ((((((Repeat (Unfolds
"equiv_rel refl sym trans" 3))
CollapseTHEN (
Unfold 'member' 0))·)
CollapseTHEN (PrimEqCD))·)
CollapseTHENM (
(Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term)))·

1: .....eq aux..... NILNIL

3. $(\forall a{:}T.\ E(a,a))$
$\&\ (\forall a,\ b{:}T.\ E(a,b) \Rightarrow E(b,a))$
$\&\ (\forall a,\ b,\ c{:}T.\ E(a,b) \Rightarrow E(b,c) \Rightarrow E(a,c))$
4. x : T
$\vdash E(x,x)$

2: .....eq aux..... NILNIL

3. $(\forall a{:}T.\ E(a,a))$
$\&\ (\forall a,\ b{:}T.\ E(a,b) \Rightarrow E(b,a))$
$\&\ (\forall a,\ b,\ c{:}T.\ E(a,b) \Rightarrow E(b,c) \Rightarrow E(a,c))$
4. x : T
5. y : T
6. $E(x,y)$
$\vdash E(y,x)$

3: .....eq aux..... NILNIL

3. $(\forall a{:}T.\ E(a,a))$
$\&\ (\forall a,\ b{:}T.\ E(a,b) \Rightarrow E(b,a))$
$\&\ (\forall a,\ b,\ c{:}T.\ E(a,b) \Rightarrow E(b,c) \Rightarrow E(a,c))$
4. x : T
5. y : T
6. x_1 : T
7. $E(x,y)$
8. $E(y,x_1)$
$\vdash E(x,x_1)$

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_79062_{quotient_wf}1.html