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

1. T : Type
2. T List
3. u : T
4. v : T List
5. $\forall b$:(T List). ($\|v\| = \|b\|$) $\Rightarrow$ ($\forall i$:$\mathbb{N}$. ($i < \|v\|$) $\Rightarrow$ ($v[i] = b[i]$)) $\Rightarrow$ ($v = b$)
6. T List
7. u_1 : T
8. v_1 : T List
9. ($\|[u$ / $v]\| = \|v_1\|$)
   $\Rightarrow$ ($\forall i$:$\mathbb{N}$. ($i < \|[u$ / $v]\|$) $\Rightarrow$ ($[u$ / $v][i] = v_1[i]$))
   $\Rightarrow$ ($[u$ / $v] = v_1$)
10. $\|v\|+1 = \|v_1\|+1$
11. $\forall i$:$\mathbb{N}$. ($i < (\|v\|+1)$) $\Rightarrow$ ($[u$ / $v][i] = [u_1$ / $v_1][i]$)

$\vdash [u$ / $v] = [u_1$ / $v_1]$
by ((EqCD)
CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 1000:n
)) (first_tok :t) inil_term)))·

1: .....subterm..... T:t1:n

$\vdash u = u_1$

2: .....subterm..... T:t2:n

$\vdash v = v_1$

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