

Inference at * 2 1 1 0
of proof for Lemma select_nth_tl:

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1. T : Type
2. T List
3. u : T
4. v : T List
5.  $\forall n:\{0 \dots \|v\|\}, i:\{0..(\|v\| - n)^-\}. \text{nth\_tl}(n;v)[i] = v[(i+n)]$ 
6.  $n : \{0 \dots \|v\|+1\}$ 
7.  $i : \{0..((\|v\|+1) - n)^-\}$ 
8.  $n \leq 0$ 
9.  $n = 0$ 
 $\vdash [u / v][i] = [u / v][(i+n)]$ 
  by PERMUTE{1:n, 2:n, 1:n, 3:n, 4:n, 5:n, 4:n, 6:n, 7:n, 8:n, 9:n}

1: .....wf..... NILNIL

 $\vdash T = T$ 
2: .....wf..... NILNIL

 $\vdash [u / v][i] = [u / v][i]$ 
3: .....wf..... NILNIL

 $\vdash [u / v] = [u / v]$ 
4: .....wf..... NILNIL

 $\vdash i \in \mathbb{Z}$ 
5: .....wf..... NILNIL

 $\vdash n \in \mathbb{Z}$ 
6: .....wf..... NILNIL

 $\vdash 0 \in \mathbb{Z}$ 
7:

 $\vdash i = i$ 
8: .....antecedent..... NILNIL

 $\vdash (0 \leq (i+n)) \ \& \ ((i+n) < \|[u / v]\|)$ 
9:

 $\vdash [u / v][i] = [u / v][(i+0)]$ 
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http://www.nuprl.org/FDLcontent/p0_963683_/p121_58888_{select_nth_tl}2_1_1_0.html