Inference at $*$
of proof for Lemma complete_nat_ind:

$\vdash \forall P{:}(\mathbb{N} \to \mathbb{P}\{\mathrm{k}\}).\ (\forall i{:}\mathbb{N}.\ (\forall j{:}\mathbb{N} i.\ P(j)) \Rightarrow P(i)) \Rightarrow (\forall i{:}\mathbb{N}.\ P(i))$
by (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term)

1:

1. $P : \mathbb{N} \to \mathbb{P}\{\mathrm{k}\}$
2. $\forall i{:}\mathbb{N}.\ (\forall j{:}\mathbb{N} i.\ P(j)) \Rightarrow P(i)$
3. $i : \mathbb{N}$

$\vdash P(i)$

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_92680_{complete_nat_ind}.html