

Inference at \* 1  
of proof for Lemma choicef\_wf:

1.  $xm : \forall P:\mathbb{P}. P \vee (\neg P)$
2.  $T : \text{Type}$
3.  $P : T \rightarrow \mathbb{P}$
4.  $\exists a:T. P(a)$

$\vdash \text{case } xm(\{y:T \mid P(y)\}) \text{ of } \text{inl}(z) \Rightarrow z \mid \text{inr}(w) \Rightarrow \text{"???"} \in T$   
by ((At Type (GenConcl  $xm(\{y:T \mid P(y)\}) = z$ ))  
CollapseTHENA ((Auto\_aux (first\_nat 1:n  
) ((first\_nat 1:n),(first\_nat 3:n)) (first\_tok :t) inil\_term)))

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5.  $z : \{y:T \mid P(y)\} \vee (\neg\{y:T \mid P(y)\})$
6.  $xm(\{y:T \mid P(y)\}) = z$

$\vdash \text{case } z \text{ of } \text{inl}(z) \Rightarrow z \mid \text{inr}(w) \Rightarrow \text{"???"} \in T$   
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