Inference at $*$
of proof for Lemma choicef_wf:

$\vdash \forall xm$:XM, T:Type, P:($T \to \mathbb{P}$). ($\exists a$:T. $P(a)$) $\Rightarrow$ (($\in x$:T. $P(x)$) $\in T$)
by ((((((UnivCD)
CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term)))·)
CollapseTHEN (Unfold ‘choicef‘ 0))·)

CollapseTHEN (RepUnfolds “xmiddle decidable“ 1))·

1:

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

$\vdash$ case $xm(\{y$:$T |\ P(y)\}\ )$ of inl(z) => z | inr(w) => "???" $\in T$

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_97906_{choicef_wf}.html