Inference at $*$
of proof for Lemma or_functionality_wrt_iff:

$\vdash \forall P_1,P_2,Q_1,Q_2{:}\mathbb{P}.\ (P_1 \iff P_2) \Rightarrow (Q_1 \iff Q_2) \Rightarrow ((P_1 \vee Q_1) \iff (P_2 \vee Q_2))$
by ((GenUnivCD)
CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term)))·

1:

1. $P_1 : \mathbb{P}$
2. $P_2 : \mathbb{P}$
3. $Q_1 : \mathbb{P}$
4. $Q_2 : \mathbb{P}$
5. $P_1 \iff P_2$
6. $Q_1 \iff Q_2$
7. $P_1 \vee Q_1$

$\vdash P_2 \vee Q_2$

2:

1. $P_1 : \mathbb{P}$
2. $P_2 : \mathbb{P}$
3. $Q_1 : \mathbb{P}$
4. $Q_2 : \mathbb{P}$
5. $P_1 \iff P_2$
6. $Q_1 \iff Q_2$
7. $P_2 \vee Q_2$

$\vdash P_1 \vee Q_1$

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http://www.nuprl.org/FDLcontent/p0_359040_/p121_98783_{or_functionality_wrt_iff}.html