Bulletin of the **S**ection of **L**ogic
Volume 20:3/4 (1991), pp. 116–116

reedition 2005 [original edition, pp. 116–116]

Hans-Peter Tuschik

QUANTIFICATION OVER LINES

Let $\mathcal{A}$ be a first-order model for the language L (with universum A) and q be a family of subsets of A. $<\mathcal{A}, q>$ is called a *geometric model* iff the family q satisfies.

(i) every member of q is infinite,

(ii) the intersection of any two different sets from q contains at most one element,

(iii) for any different points $a, b \in A$ there is some $X \in q$ which contains a and b.

Now the language L is extended by the extra quantifier Q which has the intended meaning "there is some $U \in q$ such that for all $x \in U \ldots$" We consider the logic of all sentences of $L(Q)$ valid in all geometric models. There is a set of axioms for this logic for which we can prove the completeness theorem.

Humboldt Universität
Sektionen Mathematik
PF1297, 1086 Berlin
Germany