

# TPTPTP Poition Statement

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**The Lemma Question** I feel that the lemmma formula type should definitely *not* be required to be a logical consequence of the axioms. This is because it offers you a convenient and clean way to bring domain-specific information into the problem, perhaps relying on properties of the system your axioms are modelling which are not captures by the axioms. You could argue that if your lemmas are not provable from the axioms, then they should themselves be axioms. I would argue that the split gives you more flexibility in your theorem proving strategy. For example, in certain cases, it can be very effective to use lemmas only to check for redundancy, but not to derive new clauses.

**x2tptp** TPTP should include 1) something to convert the most common formats into TPTP syntax and 2) an aid to allow people with little parse-writing experience to convert their own formats into TPTP. These two things would also encourage people to submit their own problems to the TPTP library.

**Guidance** It would help a lot if there were some short notes somewhere explaining what the purpose of the bits of TPTP syntax is - for example, what is a hypothesis as opposd to a conjecture, etc..