```
consts HappyMan::"τ" Human::"τ" Female::"τ" Doctor::"τ" Professor :: "τ" (* Konzepte *)
consts married::"σ" hasChild::"σ"                                        (* Rollen *)
consts BOB::"i" MARY::"i"                                                (* Individuen *)
axiomatization where diff1: "BOB ≠ MARY"

(* Beispiel für TBox *)
axiomatization where
  tbox1: "HappyMan ≜ (Human⊓~Female⊓(∃married Doctor)⊓(∀hasChild (Doctor⊔Professor)))" and
  tbox2: "Doctor ⊑ Human" and
  tbox3: "Female ⊑ HappyMan"

(* Konsistenz *)
abbreviation inkonsistent  where "inkonsistent A ≡ (A = ⊥)"
abbreviation konsistent    where "konsistent   A ≡ (A ≠ ⊥)"

lemma "inkonsistent Female"   sledgehammer[remote_leo2] oops
lemma "inkonsistent HappyMan" sledgehammer[remote_leo2] oops
lemma "inkonsistent HappyMan" nitpick oops
lemma "konsistent HappyMan"   nitpick [satisfy,user_axioms] oops
```



```
Sledgehammering...
"remote_leo2": Try this: by (metis (lifting) tbox1 tbox3) (24 ms).
```