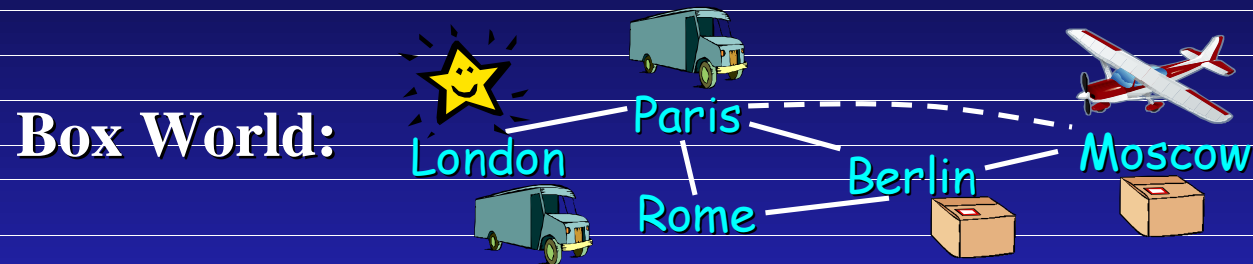


Why Solve First-order MDPs?

- Relational desc. of (prob) planning domain in (P)PDDL:



```
(:action load-box-on-truck-in-city
:parameters (?b - box ?t - truck ?c - city)
:precondition (and (BIn ?b ?c) (TIn ?t ?c))
:effect (and (On ?b ?t) (not (BIn ?b ?c))))
```

- Can solve a *ground MDP* for *each* domain instantiation:

◆ 3 trucks:  2 planes:  4 boxes: 

- Or solve *first-order MDP* for *all* domain inst. at once!

- ◆ Lift PPDDL MDP specification to first-order (FOMDP)
- ◆ Soln makes value distinctions for *all* dom. instantiations!