

$Init(At(C_1, SFO) \wedge At(C_2, JFK) \wedge At(P_1, SFO) \wedge At(P_2, JFK)$   
 $\wedge Cargo(C_1) \wedge Cargo(C_2) \wedge Plane(P_1) \wedge Plane(P_2)$   
 $\wedge Airport(JFK) \wedge Airport(SFO))$

$Goal(At(C_1, JFK) \wedge At(C_2, SFO))$

$Action(Load(c, p, a),$

PRECOND:  $At(c, a) \wedge At(p, a) \wedge Cargo(c) \wedge Plane(p) \wedge Airport(a)$

EFFECT:  $\neg At(c, a) \wedge In(c, p)$ )

$Action(Unload(c, p, a),$

PRECOND:  $In(c, p) \wedge At(p, a) \wedge Cargo(c) \wedge Plane(p) \wedge Airport(a)$

EFFECT:  $At(c, a) \wedge \neg In(c, p)$ )

$Action(Fly(p, from, to),$

PRECOND:  $At(p, from) \wedge Plane(p) \wedge Airport(from) \wedge Airport(to)$

EFFECT:  $\neg At(p, from) \wedge At(p, to)$ )