

Example Templates

Elly Zoe Winner and Manuela Veloso

```
while ((in_current_state (at(v?1:obj v?2:loc)) or
      in_current_state (inside(v?1:obj v?4:rocket))) and
      (in_goal_state (at(v?1:obj v?3:loc)) or
      in_goal_state (inside(v?1:obj v?4:rocket)))) do
  if (in_current_state (at(?1:obj ?2:loc)) and
      in_current_state (at(?4:rocket ?5:loc))) then
    move(?4:rocket ?5:loc ?2:loc)
  while (in_current_state (at(v?6:obj ?2:loc)) and
        in_current_state (at(?4:rocket ?2:loc)) and
        (in_goal_state (at(v?6:obj v?7:loc)) or
        in_goal_state (inside(v?6:obj ?4:rocket)))) do
    load(?6:obj ?4:rocket ?2:loc)
  while (in_current_state (inside(v?6:obj ?4:rocket)) and
        in_current_state (at(?4:rocket ?2:loc)) and
        in_goal_state (at(v?6:obj ?2:loc))) do
    unload(?6:obj ?4:rocket ?2:loc)
  while (in_current_state (inside(v?1:obj v?2:rocket)) and
        in_current_state (at(v?2:rocket v?3:loc)) and
        in_goal_state (at(v?1:obj v?4:loc))) do
    move(?2:rocket ?3:loc ?4:loc)
  while (in_current_state (inside(v?5:obj ?2:rocket)) and
        in_goal_state (at(v?5:obj ?4:loc))) do
    unload(?5:obj ?2:rocket ?4:loc)
  while (in_current_state (at(v?1:rocket v?2:loc)) and
        in_goal_state (at(v?1:rocket v?3:loc))) do
    move(?1:rocket ?2:loc ?3:loc)
```

Table 1: Rocket domain template

```
while (in_goal_state (at(?1:ball ?2:room)) and
      in_current_state (at(?1:ball ?3:room)) and
      not same (?2:room ?3:room) and
      in_current_state (at-robby(?5:room))) do
  if (not same (?3:room ?5:room)) then
    move(?4 ?5 ?3)
  pick(?1 ?4 ?3)
  move(?4 ?3 ?2)
  drop(?1 ?4 ?2)
```

Table 2: A simple template that solves all gripper-domain problems involving moving balls from one room to another.