

# Plan Merging in the asprilo Framework

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# Introduction

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- Combining plans for single robots

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- Used the asprilo framework and ASP

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- Used the asprilo framework and ASP
- Plans created with asprilo

# Renaming of Predicates

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- New names needed for every plan



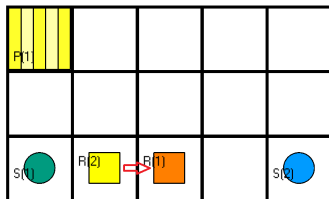
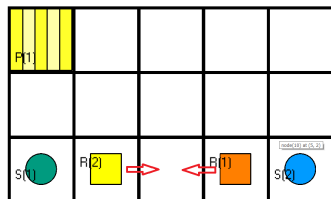
# Renaming of Predicates

- New names needed for every plan
- → New argument for every predicate: *conflict\_nr*

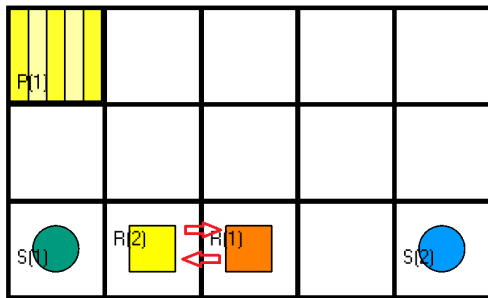
# Renaming of Predicates

- New names needed for every plan
- $\rightarrow$  New argument for every predicate: *conflict\_nr*
- Higher *conflict\_nr*  $\rightarrow$  newer plan

# Conflict Detection and Selection



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# Conflict Solving

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- Randomly dodge in any possible direction or wait

# Conflict Solving

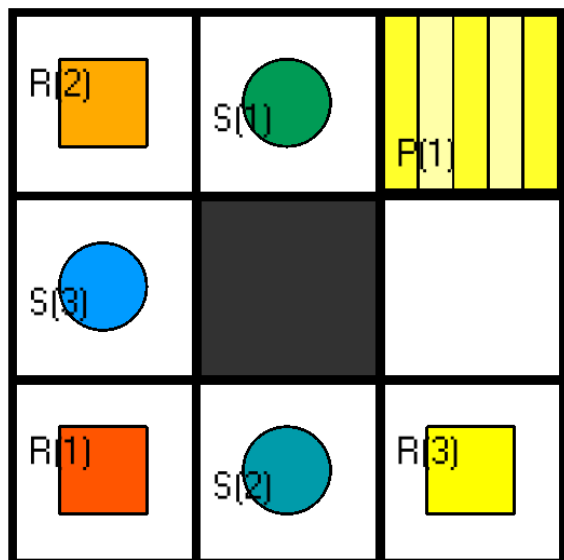
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- Wait: remaining plan gets pushed one step back

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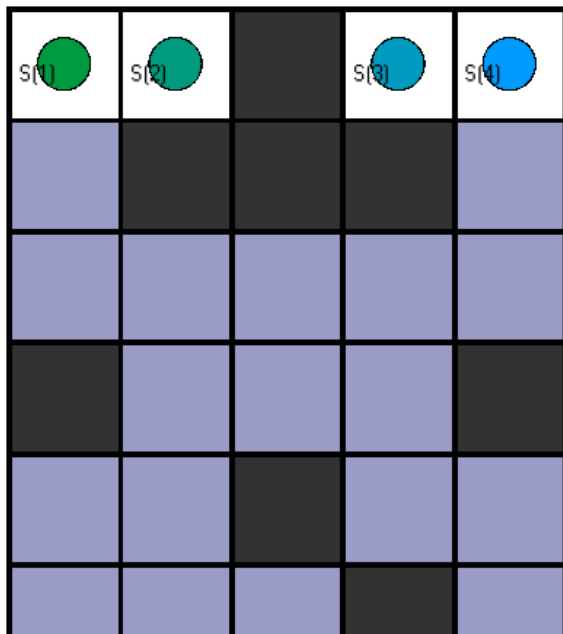
- Randomly dodge in any possible direction or wait
- Wait: remaining plan gets pushed one step back
- Dodge: go back at random time step



## Unsolvable Benchmarks



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- One other approach better in every way



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