

Task-Skill-Motion System Architecture

Group 7

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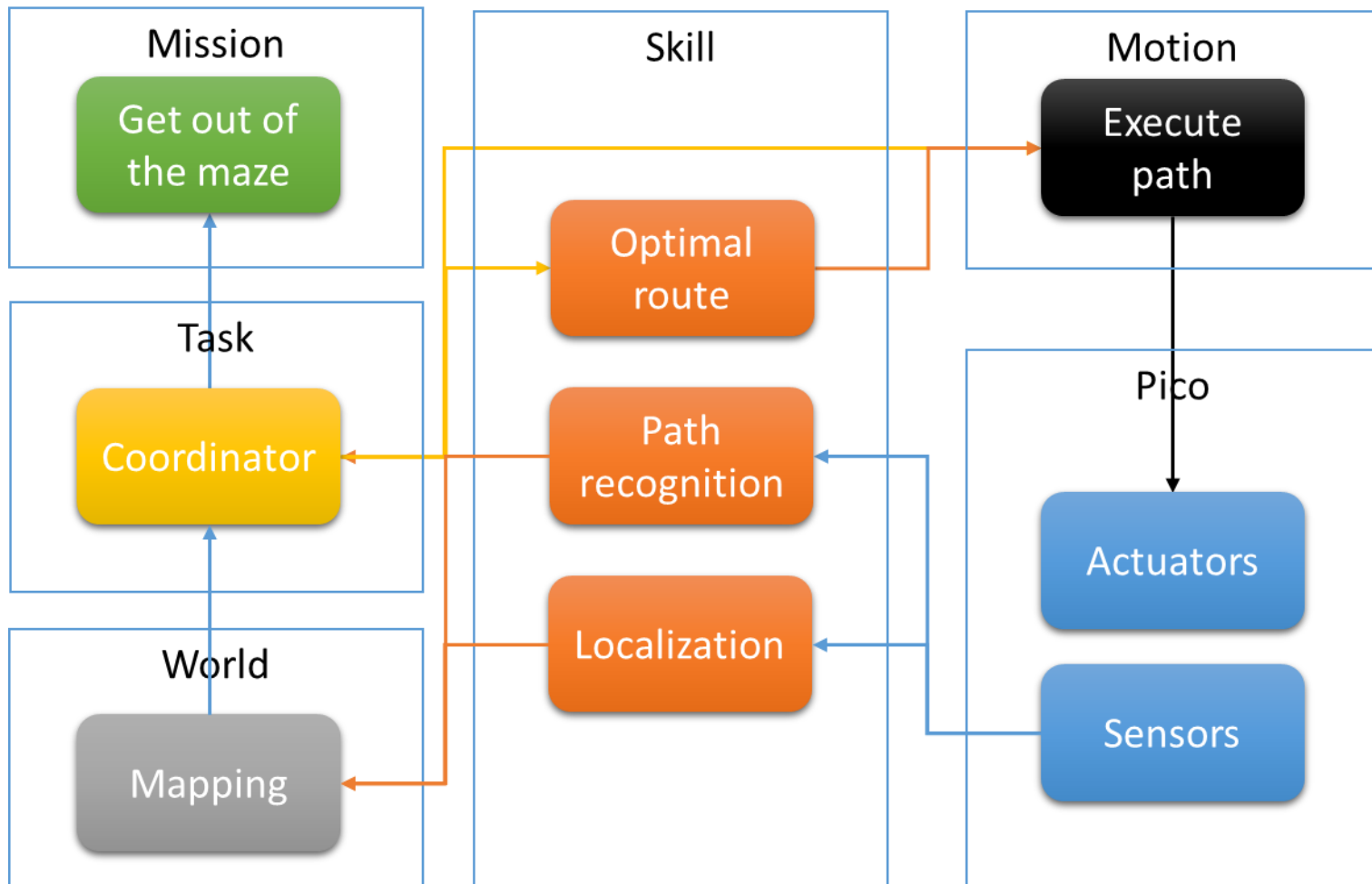
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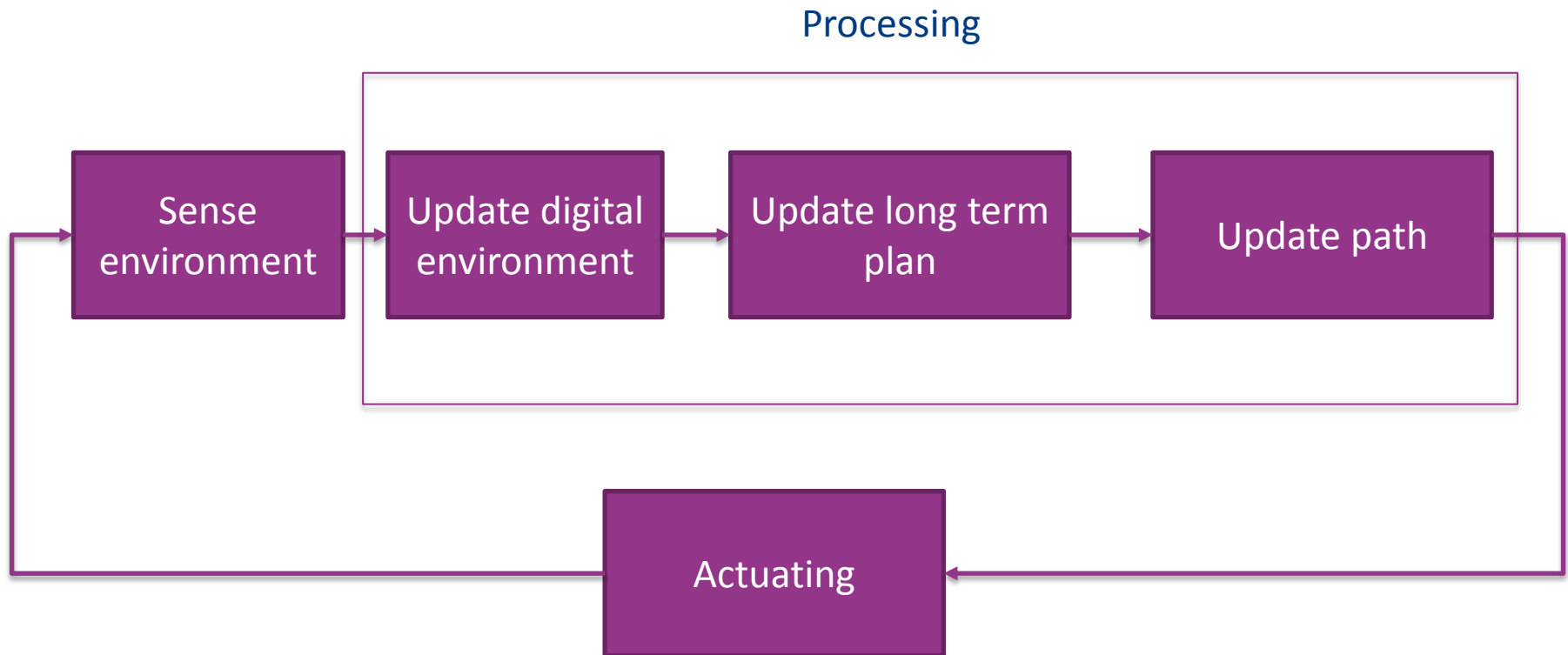
N.W.A. Strijbosch

- Behaviour model: Task-Skill-Motion
- Structure model: Composition Pattern
- Conclusion



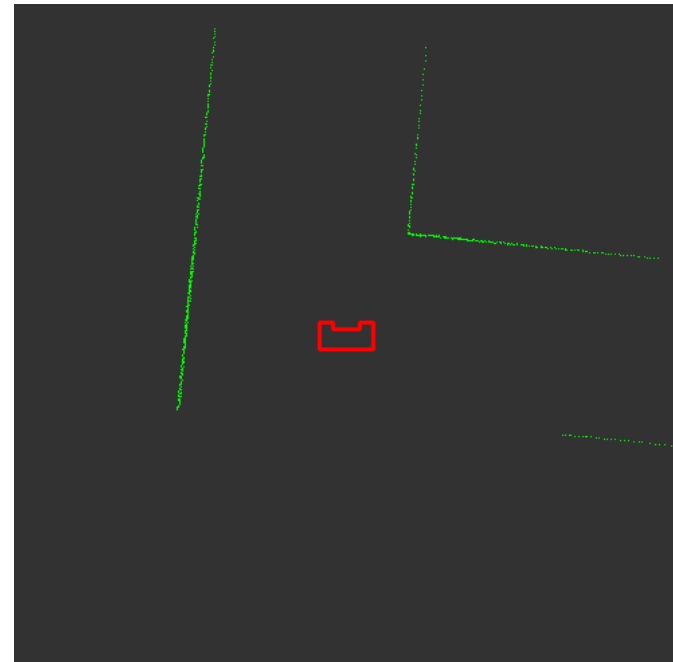


Main loop:



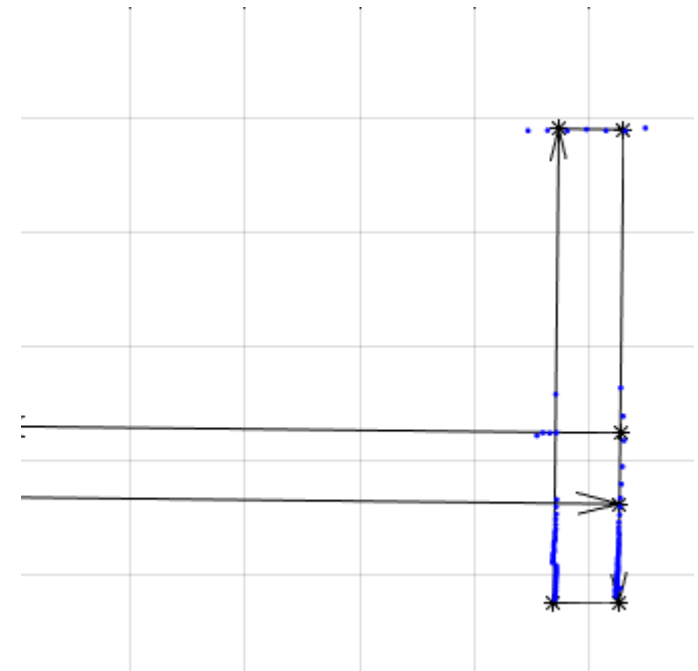
Sense environment

- Read out laser data
- Read out odometry data



Updating digital environment

- Maximize open space with rectangles
- Recognize crossings, ends, finish



Update long term plan

Corridor: Left or Right when possible

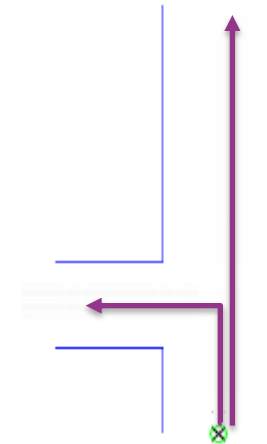
Stop at finish

Maze: Keep track of visited crossings

Determine next crossing

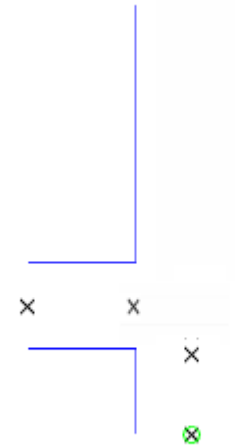
Open door

Stop at finish



Update path

- Determine setpoint
- Potential field calculation
- Calculate drive direction



Actuate

- Translate
- Rotate
- Beep for doors

- Multilevel design
- Seperate cooperative functions in main loop