

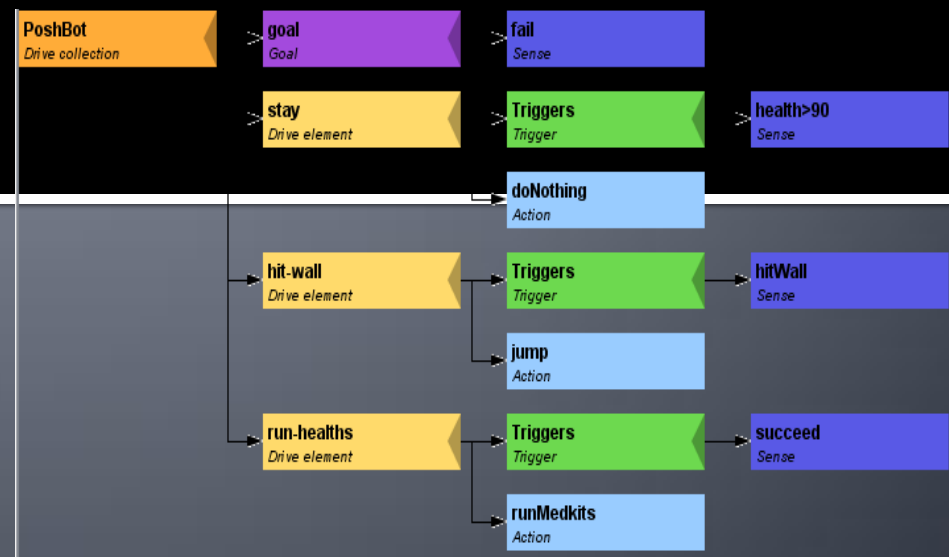
Faculty of mathematics and physics
Charles University at Prague
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UT2004 bots made easy!

Pogamut 3

Lecture 5 – POSH



Warm up!

Fill the test for this lecture!

Home work:

DeathMatch of two bots

Let's review home works from previous lectures!

Today's menu

1. Gentle POSH introduction

- Actions/Senses
- Drive collection/Competences/Action Patterns

2. Using POSH to implement a bot

- POSH bot maven project archetype

POSH?

- **POSH**
 - Parallel-rooted, Ordered Slip-stack Hierarchical planner
- To put it simply:
 - a reactive planner working with **FIXED, PRE-SET** plans
- To put it simpler:
 - a tool enabling to specify **if – then** rules with **priority** in a **tree like structure**

POSH - primitives

- **Actions and Senses**
 - if (sense) then (action)
- **Drive Collection**
 - First level of if-then rules
- **Competence**
 - Second – Nth level of if-then rules
- **Action Patterns**
 - Specifies N actions that will be performed in a sequence

POSH plan structure

```
DriveCollection(  
  1. if (sense) then competence1 return;  
  2. if (sense) then competence2 return;  
  3. if (sense) then action-pattern1 return;  
  4. if (sense) then competence3 (  
      1. if (sense) then action1 return;  
      2. if (sense) then competence4 return;  
      3. if (sense) then action2 return;  
      4. if (sense) then action-pattern return;  
      5. return;  
  )  
)
```

```
ActionPattern(  
  action1+return, action2+return, action3+return,  
  action4+return  
)
```

Competence vs Drive Collection?

- What's the difference?
- In interruptions:
 - When sense of higher drive collection element becomes active, the higher element takes control immediately.
 - When sense of higher element in competition becomes active, the lower element first finishes and only afterwards the higher sense takes control. (Hard-to-utilize, nested competences are rare.)
- Anyway, it's a bit fuzzy and it depends on POSH implementation...

POSH bot archetype

GroupId:

cz.cuni.amis.pogamut.ut2004.examples

ArtifactId:

07-sposh-prey-bot-archetype

Version:

3.2.1

Repository:

<http://diana.ms.mff.cuni.cz:8081/artifactory/repo>

Assignment (or HomeWork)

- Create your own HunterBot in POSH!
 1. Provide item collector behavior if needed
 2. Provide simple combat behavior
 3. Try to balance priorities / parameters!
 4. Use DM-10n1-Albatross map

Send your assignments to

- Completely zip-up your project(s) folder
- Send it to:
 - Jakub Gemrot (Friday practice lessons)
 - jakub.gemrot@gmail.com
 - Michal Bída (Wednesday practice lessons)
 - michal.bida@gmail.com