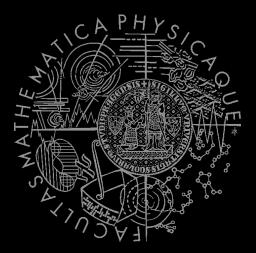
Faculty of mathematics and physics Charles University at Prague 13th April 2011



UT2004 bots made easy!

Pogamut 3

Lecture 6 – CTF, POSH



Warm up!

Fill the test for this lecture!

Home work: POSH hunter bot

Let's review home works from previous lectures!

Today's menu

Capture the Flag (CTF)

Rules of the game type

2. Modules of interest

 Pogamut modules facilitating development of the CTF bot.

Task: Making a CTF bot using POSH

POSH bot maven project archetype

CTF rules

- Players/bots are divided into two teams (red and blue).
- Each team has a flag in his base.
- The goal of the team is to capture the flag of the opposite team and bring it to their home base.
- When managed, the team scores 1 point.
 - Team can only bring opposite flag home and score a point, if the team flag is in team home base!
- If the flag is dropped it will be returned to home base after some time.

Pogamut CTF support

- What team I am in?
 - info.getTeam();
- Where is my base?
 - Team o game.getGameInfo().getRedBaseLocation();
 - Team 1 game.getGameInfo().getBlueBaseLocation();
- Am I winning?
 - game.getTeamScores();
 - info.getTeamScore();

Pogamut CTF support II

I want my flag!

- Flag is represented by FlagInfo object.
- game.getCTFFlags();
- FlagInfo myFlag = game.getCTFFlag(info.getTeam());

Is someone messing with my flag?

- myflag. getState().toLowerCase() returns "held", "dropped" or "home"
- myflag. getHolder() exported only if flag is visible!

Launching CTF game

C:\Games\UT2004\System\ucc server CTF-FaceClassic?game=GameBots2004.BotCTF Game

POSH bot archetype

```
GroupId:
   cz.cuni.amis.pogamut.ut2004.examples
ArtifactId:
    o7-sposh-prey-bot-archetype
Version:
   3.2.1-SNAPSHOT
Repository:
   http://diana.ms.mff.cuni.cz:8081/artifactory/repo
```

Assignment (or HomeWork)

- Create your own CTF bot in POSH!
 - Provide item collector behavior
 - 2. Provide simple combat behavior
 - Provide CTF behavior
 - 4. Try to balance priorities / parameters!
 - 5. Can you make the bot so good, he will beat you? (with highest skill level set)
- Use map CTF-FaceClassic
 - Beware of tricky teleporters the actual distance between two points doesn't have to be the best measure of what is close!
- Note translocator does not work for the bots.

Assignment (advanced)

- Create two bots playing CTF and cooperating with each other.
 - Think about how to exchange information.
 - Will you use text message? Or some implicit cooperation (he is around flag, he is defending)? Or some custom shared object?
- Use Java or POSH.
- Use map CTF-FaceClassic

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